



2009

# CALAIS TOWN PLAN

## Table of Contents

<b>PART I.....</b>	<b>4</b>
A. VISION .....	4
Calais Town Vision.....	4
Plan of Action .....	4
B. A SHORT HISTORY OF CALAIS .....	5
C. WHO WE ARE .....	6
Who are we? .....	6
A Statistical Profile:.....	7
<b>PART II .....</b>	<b>10</b>
A. SENSE OF COMMUNITY .....	10
Introduction.....	10
Current Conditions.....	11
Issues.....	12
B. TRANSPORTATION .....	13
Introduction.....	13
Current Conditions.....	13
Issues.....	15
Regulatory Guidance .....	19
C. UTILITIES/FACILITIES.....	19
Electricity and Communications.....	19
Introduction.....	19
Current Conditions.....	19
Issues.....	20
Regulatory Guidance: .....	21
Public Water Systems .....	21
Introduction.....	21
Current Conditions.....	21
Issues.....	22
Regulatory Guidance .....	23
Sewage .....	23
Introduction.....	23
Current Conditions.....	24
Issues.....	24
Solid Waste Facilities .....	25
Introduction.....	25
Current Conditions.....	25
Issues.....	25
Child Care .....	26
Introduction.....	26
Issues.....	27
D. LAND USE .....	27
Introduction.....	27
Current Conditions.....	28
Buildout Analysis.....	29

Zoning .....	30
Regulatory Guidance .....	33
E. NATURAL RESOURCES .....	34
Introduction and Current Conditions .....	34
Challenges and Opportunities .....	38
Regulatory Guidance .....	39
F. AGRICULTURE .....	40
Introduction.....	40
Current Conditions.....	40
Regulatory Guidance and Policy .....	42
G. HISTORIC RESOURCES .....	43
Introduction.....	43
Current Conditions.....	43
Issues.....	44
Regulatory Guidance .....	44
H. EDUCATION FACILITIES .....	45
Introduction.....	45
Calais Elementary School.....	45
U-32 Middle-High School .....	47
Issues.....	47
Regulatory Guidance: .....	48
I. MUNICIPAL SERVICES & FACILITIES.....	48
Introduction.....	48
Current Conditions.....	48
Issues.....	50
J. HOUSING .....	50
Introduction.....	50
Current Conditions.....	51
Issues.....	52
Regulatory Guidance and Policy .....	53
K. RECREATIONAL RESOURCES.....	54
Introduction.....	54
Issues.....	55
L. ENERGY SECTION .....	55
Introduction.....	55
Current Conditions.....	56
Town Operation .....	56
Residential Energy Use.....	57
Waste Management & Recycling .....	58
Alternative Energy Production .....	58
M. ECONOMIC DEVELOPMENT .....	61
Current Conditions.....	61
Challenges and Opportunities .....	62
N. REGIONAL ISSUES.....	64
Introduction.....	64
Current Conditions.....	64

# PART I

## A. VISION

Why should Calais have a Town Plan? An approved Town Plan enables the citizens of Calais to have significant influence over the future within their Town. Any project subject to Act 250 must comply with the Town Plan. A Town Plan also offers guidance to Town boards and commissions in their review of development projects and serves as the basis for evaluating and revising the Town's zoning ordinance. Most importantly, our plan is a statement of who we are as a community, what we hold as important, and how we want our community to evolve in the future.

### Calais Town Vision

We envision Calais as a viable, sustainable community for people of all ages that will proactively adapt to global environmental and economic changes while preserving our rural characteristics – agriculture, core forests, wildlife corridors, and other natural resources. We envision that within 20 years Calais will:

- Have expanded, compact, livable, economic vibrant villages surrounded by open, working landscapes.
- Provide meaningful local employment to at least 40% of our working population.
- Meet a wide spectrum of housing needs through zoning, innovative architecture and landscaping design, village plans, and collaboration.
- See its residents move around town and to other destinations by increased walking, biking and a variety of low-energy transportation modes.
- Generate 25% of our electricity through individual and small group solar, wind, biomass, methane, and hydroelectric generating systems.
- Remodel existing buildings and construct new buildings using the most energy efficient materials and techniques with an emphasis on renewable energy.
- See that all residents have access to broadband services designed to improve high-speed communications and essential for economic development.
- Provide small scale social financing and advice to property and business owners.
- Produce 50% of our food.
- Grow and locally sell a greater variety and amount of agricultural products.
- Continue to enjoy our clean lakes and ponds.

### Plan of Action:

Each section throughout the Town Plan outlines goals that pertain to that section as well as action plans for each goal. The following three across-the-board actions affect the entire Town Plan and virtually every goal in this 2009 Town Plan. These actions will be initiated and coordinated by the Selectboard and the Planning Commission.

- a. Develop and sustain community based, resident-friendly, information sharing solutions in support of the town's vision and goals.
- b. Initiate and coordinate community action groups to focus on specific town challenges – define problems, gather information, research solutions, propose/implement solutions.
- c. Develop a list of willing resident leaders and local experts whose specific expertise would be helpful in attaining the vision and goals.



**East Calais**

## **B. A SHORT HISTORY OF CALAIS<sup>1</sup>**

For thousands of years before European settlers came to the area, Native American inhabitants almost surely lived, hunted and traveled through what is now Calais. On October 1, 1780, the township of Calais was granted to seventy men by the General Assembly of the State of Vermont for 1479 Pounds 14 Shillings and 14 Pence. The majority of the "proprietors" were from Charlton, Rehoboth, and Brookfield, Massachusetts

In early 1787, Francis West settled just northeast of today's Adamant, however, he thought he was clearing land in (East) Montpelier. Abijah, Asa and Peter Wheelock arrived in June, 1787. They left their wagon in Montpelier where the road ended, cleared their land and returned to Massachusetts for the winter. They built the first house in Calais, southeast of Kents Corners.

In 1793, Colonel Davis built a sawmill in Gospel Hollow. He built a corn mill the same year and named the land around his mills "Calais Center." By 1828, there were nine sawmills, enterprises producing wooden clocks, axes, scythes, and bells, as well as blacksmith shops, corn and grist mills, a distillery, harness makers, shoe & boot makers, starch mills, and a wool carding factory. By the middle of the 19th century much of the land had been cleared and turned to crops. Farmers were starting to use horses with mechanized equipment. Farms were larger and produced cash crops with hired hands. In 1850, the first Agricultural Census listed every farm in Calais, along with acreage, value, number of hands, number of milk cows, working oxen, other

---

<sup>1</sup> Based on an article in The Vermonter by Dorman Kent Oct 1914, Hemenway's Gazetteer of 1882, While the Sun Shines by Allen Yale, Jr. and a few interviews conducted by Peter Harvey..

cattle, sheep, swine, value of the livestock, production of wheat, rye, Indian corn, oats, wool, peas & beans, potatoes, buckwheat, orchard butter, cheese, hay and maple sugar.

The population of Calais declined with the expansion of western United States. Gradually, Calais farmers turned from sheep to dairy cows and began producing cheese because it stored well. Later, butter was also made for sale. Buyers from the eastern cities came around to farms by wagon. Also, a market developed for maple sugar (syrup came later) and Calais exported such things as: potato starch, leather boots, granite, and even pianos. Walton's Directory of 1899 shows that Calais had 4 post offices, 2 creameries, 6 mills, 12 stores selling everything from feed to millinery, 1 hotel, 3 granite works, 3 active churches, and 2 doctors.

Around 1900, the refrigerated boxcar made it possible to ship milk to southern New England, but Calais roads were too poor to enable farmers to get their milk to the trains. In the 1930's, the state began improving roads so more milk could be shipped. After World War II, commuters required even better roads. In 1946, Route 14 was paved from East Calais to Hardwick. In 1959, Calais started paving the County Road in pieces from the East Montpelier line. East Montpelier also began paving the road from the Montpelier line. It took years to fill the gaps between Montpelier and Maple Corner.

Calais grew rapidly in the Sixties, Seventies and Eighties after nearly a century of population decline. Abandoned houses and camps were turned into year-round houses, and new houses were built. Over that period the Town's population more than doubled (122% increase) with an average of 28 people being added to the rolls each year. Since 1990, the Town's population growth has slowed dramatically. In fact, between 1990 and 2006, Calais has added only an estimated 26 people to population (1.6 per year). However, in that same period of time, the year-round housing units in Calais increased from 565 houses to 726 (161 units), a growth of 22% (10 per year). Now, it is apparent that Calais is still changing.

## **C. WHO WE ARE**

### **Who are we?**

We are relatively young: 28% of us are 19 years old or less, while only 10% are 65 or older. Most of us work elsewhere -- our Town is a bedroom community. In 2000, 80% percent of the resident workforce worked outside of Calais. At work, Calais residents perform a wide range of occupations, many requiring considerable skill. In 2000 almost 50% of us report working in managerial or professional positions, and although Calais residents of the past may have once earned their living from the land, fewer than 1% do so today. Most of us have a moderate income. Only a few households reported exceptionally high incomes in 1999, and about 6.5% of town residents have incomes below the poverty level.

Historically, Calais' population has lived and socialized within villages and hamlets -- North Calais, East Calais, Kents Corner, Adamant, and Maple Corner -- which had industries, schools, churches and stores. However, most of the rapid population growth since 1970 occurred along roads, outside of the villages and hamlets.

## A Statistical Profile:

*Calais is rural; population has been stable.* Calais is rural, both in appearance and according to statistical conventions. Throughout the 1980's, our rate of population growth exceeded the regional average by a factor of six and the State average by more than two and one half times. During the 1990's population growth stopped. Our population increased by only 8 people from 1990 to 2000. In 2007 our population was 1,538. However we believe this pause in growth is temporary.

**Table 1 Population 1960 - 2000** (Source: U.S. Census)

	Calais	Wash. County	Vermont
1960	684	42,860	389,881
1970	749	47,659	444,732
1980	1,207	52,895	511,456
1990	1,521	54,928	562,758
2000	1,529	58,039	608,827

Our planning assumptions continue to be based on increases in population. Because of Calais' proximity to regional job centers, continued growth is likely. Population projections by the Central Vermont Regional Planning Commission ("CVRPC") suggest that the town will soon surpass the historical high. Since Calais' land area will not change, this means that our population density will continue to increase.

**Table 2 Age Distribution 1970-2000** (Source: U.S. Census)

Year	under 5 years	5-17 years old	18-64 years old	65 and over
1970	81 (11%)	218 (29%)	375 (50%)	75 (10%)
1980	105 (09%)	281 (23%)	720 (60%)	101 (08%)
1990	119 (08%)	353 (23%)	927 (62%)	122 (08%)
2000	70 (05%)	346 (23%)	958 (63%)	155 (10%)

Despite low population growth in the past decade, new houses in Calais have continued to be built. The Town is among the fastest growing in the region in terms of new housing units and number of households.

**Table 3 Housing Units** (Source: U.S. Census)

	1970	1980	1990	2000	Percent Change 1990 to 2000
Calais	324	573	679	773	13.8%
County	16258	22113	25328	27644	9.1%
State	165063	223199	271214	294382	8.5%

Continued population and housing growth will present interesting challenges. Demands for municipal services will increase as will impacts on natural resources. Careful planning will be needed for Calais to accommodate this growth while retaining its rural character and identity.

In earlier times, the Calais economy relied on the land and other natural resources. Until the second half of the 20th century, mill-powered manufacturing, agriculture, mining, and forestry

were the town's employment mainstays and most residents made their living in town. Several retail establishments catered to the population. Now, with only a few retail establishments, and no large employers, Calais has evolved into a bedroom community. According to 1990 and the 2000 census, 79% of Calais workers drive to another community to work.

**Table 4 Employment and Occupation 2000** (Source US Census)

	Calais		Washington Co.	
Employed 16 years and over	819	100.0%	31276	100%
Management, professional, and related occupations	392	47.9%	12246	39.2%
Service occupations	77	9.4%	4629	14.8%
Sales and office occupations	152	18.6%	8308	26.6%
Farming, fishing, and forestry occupations	7	0.9%	189	0.6%
Construction, extraction, and maintenance occupations	84	10.3%	2668	8.5%
Production, transportation, and material moving	107	13.1%	3236	10.3%
Agriculture, forestry, fishing and hunting, and mining	17	2.1%	655	2.1%
Construction	69	8.4%	1989	6.4%
Manufacturing	81	9.9%	3219	10.3%
Wholesale trade	16	2.0%	1016	3.2%
Retail trade	61	7.4%	3465	11.1%
Transportation and warehousing, and utilities	20	2.4%	844	2.7%
Information	30	3.7%	1030	3.3%
Finance, insurance, real estate, and rental and leasing	53	6.5%	2173	6.9%
Professional, scientific, management, administrative, and waste management services	73	8.9%	2289	7.3%
Educational, health and social services	224	27.4%	7298	23.3%
Arts, entertainment, recreation, accommodation and food services	49	6.0%	2527	8.1%
Other services (except public administration)	43	5.3%	1604	5.1%
Public administration	83	10.1%	3167	10.1%

**Table 5 Place of Work, 1990, 2000** (Source US Census)

	1990 census			2000 census	
Calais workers 16 and over	716	100.0%	803	100.0%	
Worked in Calais	127	17.7%	168	20.9%	
Worked outside Calais	589	82.2%	635	79.1%	

**Table 6 Employment by Organizational Category, 2000** (Source: U.S. Census)

	Calais.		Wash Co		Vermont	
Private Wage and Salary	508	62.0%	21981	70.3%	238678	75.3%
Government	162	19.8%	6268	20.0%	45010	14.2%
Self Employed	147	17.9%	2960	9.5%	32546	10.3%
Unpaid Family	2	0.2%	67	0.2%	900	0.3%

Calais residents are well educated (see Table 7) and the work force is dominated by managerial and professional occupational categories (see Table 4). Although our median family income is about average for Vermont, our poverty rate is relatively low (see Tables 8 and 9).

**Table 7 Highest Grade Achieved for Persons 25+ years of age, 2000** (U. S. Census)

	<9 <sup>th</sup>	9-12	High	College	AA	BA	Grad.	Total
Calais #	35	78	248	148	71	225	223	1028
% of total	3.4	7.6	24.1	14.4	6.9	21.9	21.7	100
Wash. Co	1757	2783	12353	6503	3157	7789	4825	39167
% of total	4.5	7.1	31.5	16.6	8.1	19.9	12.3	100
Vermont #	20769	34127	130804	68440	31058	74124	44901	404223
% of total	5.1	8.4	32.4	16.9	7.7	18.3	11.1	100

**Table 8 Median Family Income 1979, 1989, 1999** (U. S. Census)

	1979	1989	1999
Calais	\$18,384	\$38,315	\$49,107
Washington Co.	\$16,785	\$35,395	\$51,075
State	\$17,206	\$34,780	\$48,625

**Table 9 Persons Below Poverty Level** (Source: U. S. Census)

	1979	1989	1999
Calais	9.7%	7.2%	6.5%
Washington Co.	10.9%	7.9%	8.0%
State	11.5%	9.0%	9.4%

As of 2006, thirty employers in Town provided 104 jobs or .3% of the Region's supply. Furthermore, only 21% of Calais' workforce of 803 (2000 Census) are employed within the municipality. The rest commute to an array of destinations, primarily to the "core" area of the Region (i.e., Barre, Montpelier and Berlin) but increasingly, to Chittenden County, as well. Not surprisingly, commuting times and distances for Calais' workforce are above Regional and State averages and have been on a steady incline for several decades.<sup>2</sup>

These white-collar commuting patterns may be a reflection of the fact that Calais' population is wealthier, and better educated now than at any time in its history and more so than most communities in the State. Its median family income of \$49,107 (2000 Census) is somewhat higher than Washington County and State of Vermont figures. Calais residents are more "propertied" as well - about 68% of Calais homes are owner occupied, versus 58% for the County and State. Calais' median age of 41 is three years above County and four years above State averages. Approximately 41% of its population 18 years of age or older hold a bachelors or advance degree, far exceeding Washington County (29%) and State (27%) educational achievement rates.<sup>2</sup>

<sup>2</sup> Central Vermont Regional Planning Commission, *Calais, Vermont Development Potential and Buildout Analysis*, Dec. 2007.



North Calais

## PART II

### A. SENSE OF COMMUNITY

#### Introduction

One can feel a very tangible sense of community in any number of places in Calais. It can be experienced in any of the four hamlets that comprise our modest population centers. It can also be felt in the many small groupings of two, three, four or more houses that cluster on our predominately dirt roads. Yet our sense of community is created by more than solely geographic proximity. There is an indescribable sense of sharing life in the country and all that entails. On the one hand we share the visible beauty of living in a very appealing natural setting. On the other hand there is a sense of being in this together and doing what generations of Vermonters have done before us: weathering winter, enduring mud season, stacking wood, raising our kids, making a living, and finding meaning where we can.

While we share the sense of buffer that living in the country gives us, we are not fooled into thinking we live apart from the rest of the world. We experience spiking fuel prices along with our urban neighbors and we watch the evening news of global disasters just as others do all over the world. We wonder out loud to each other, “How can we live here in Calais and work our way through the challenges of the 21<sup>st</sup> century without sacrificing the very things we love about our town?” Collectively we want to learn how to be more self sufficient and self reliant without relinquishing active participation in the 21<sup>st</sup> century. As a community we want to use the tools of our culture to our advantage while protecting our environment and caring for our children, our parents, and ourselves.

## Current Conditions

In 2008 the overwhelming majority of our workforce members hold jobs located outside of the community and we do almost all of our shopping out of town. As a bedroom community, we are more apt to meet our neighbors on the streets of Barre or Montpelier. It is important to note that despite shopping and working in larger population centers, Calais residents are very committed to living a long time in Calais. A 2008 Calais Planning Commission survey indicated that 82% of residents surveyed said they planned to live in town for at least ten more years.

Local organizations continue to bring people together and they are important in fostering a community spirit. We currently have three churches in the Town of Calais: the Old West Church, built in 1825, has Sunday services in August and a Christmas Eve candlelight service; the East Calais Church, built in 1848, has regular Sunday services seasonally rotating with South Woodbury and Woodbury; and the Adamant Church, built in 1915, has regular Sunday services. We have three community clubs, two operating out of old school houses (the Adamant Community Club, organized in 1962, and the Calais Community Recreation Association, organized in 1966, and one out of an old Grange Hall (the Maple Corner Community Club, organized in 1950, now known as the Maple Corner Community Center).<sup>3</sup>



**Maple Corner Community Club**

And our village centers have survived. We have three stores in Calais today: the Adamant Cooperative - 1936; the East Calais Store - 1850; the Maple Corner Store - 1906. It is with these village areas that many people identify and it is these (Adamant, East Calais, North Calais, Maple Corner) that they often refer to as home. In addition, our sense of community is enhanced by potluck suppers, barn dances, and annual town events such as the Adamant Black Fly Festival and the Fall Foliage Weekend.

We have an active town government primarily made up of volunteers, elected and appointed, through which we run our town. Town boards and commissions put in many hours carrying the burden of traditional Vermont self-government. These groups also provide many opportunities for individuals to become acquainted with fellow townspeople and build community. Citizen participation opportunities include:

- |                |                                |                       |
|----------------|--------------------------------|-----------------------|
| - Selectboard  | - Development Review Board     | - Cemetery Commission |
| - School Board | - Historic Design Review Board | - Planning Commission |

---

<sup>3</sup> There are many other organizations in Calais, including the Ladies Home Mission (1810), the Women's Relief Corp (1895), Woodbury Lake Association (1949), Calais Little League (1961), Calais Historical Society (1962), Mountain Tamers (1970), Calais Swim Program (1972), Nelson Pond Association, Calais Youth Sports (1985), Calais Recycling (1991), Calais Neighbors Helping Neighbors (1991), Friends of Curtis Pond (1994), and the Curtis Pond Association (1994).

- Listers

- Calais Conservation Commission - Town Constables

Many Calais men and women serve on local volunteer fire departments based in neighboring East Montpelier and Woodbury. The sense of community is enhanced across town lines as we work with our peers to raise community awareness of fire protection strategies and, of course, in emergencies as we fight fires.

The Calais Elementary School is also a major community focus for the families with children in preschool through sixth grades. The school is available to groups for meetings and sports and it has numerous parent involvement programs including: the PTNO (Parents, Teachers & Neighbors Organization); ELF (Environmental Learning for the Future); and volunteer coaching (soccer, basketball, baseball, down hill skiing, and ice skating), and for town involvement through Community Connections.

The town's recreational opportunities create community in many ways as well. Winters find groups of snow machine riders and cross-country skiers experiencing natural beauty on a network of trails that web throughout Calais. Summers are cooler courtesy of several Calais ponds where residents gather to cool off and talk with friends and neighbors.



**Memorial Hall**

## **Issues**

What kind of community do we want Calais to be? Will the escalating price of gasoline affect how we commute to our jobs? Will we carpool more? Will ever-higher transportation costs and associated food price increases cause us to rely more heavily on locally grown foods? Will community gardens find their way back into our villages? Will local food buying clubs such as the Adamant Cooperative be revitalized and serve as a new focus for community involvement? Will rapidly escalating costs of home heating fuel force more and more local residents to look to alternatives to fuel oil? Will firewood, wood pellets, and even grass pellets redefine our woodlots and grass lands as economic assets? Will high energy costs force Calais residents to relocate closer to their jobs? Will escalating energy costs prevent potential residents from relocating here? Can we work effectively together as a community to anticipate the challenges of the next few years and suggest solutions that enhance our economic vitality and our sense of community?

## **Goal - Foster community through increased involvement in:**

- a. Local government boards & commissions.
- b. Local organizations such as our churches, our school, and our community organizations.
- c. Local social and recreational clubs and associations.

## **Plan of Action -**

The Town should:

- a. ensure that current and new residents are aware of opportunities to become involved in local government;
- b. encourage residents to patronize our local stores and businesses;
- c. encourage residents to participate fully in clubs, churches, and other community organizations;
- c. sponsor face-to-face citizen study groups to examine food, energy, transportation, and economic issues of interest to the town;
- d. sponsor electronic community forums to share ideas on creating cooperatives, solving transportation challenges, creating new businesses, using farm lands anew, and other issues of concern and interest in our community;
- e. suggest new mechanisms to augment community; and
- f. support citizen involvement in other activities or organizations that further the goals of this plan.

## **B. TRANSPORTATION**

### **Introduction**

Transportation allows us to be a community and enables many townspeople to live in Calais while working or participating in other communities. Not only is the method of transportation important to a community, but also the consistency of the cost and the reliability of the method used. Transportation relies heavily on the affordability of fuel and also on a well-maintained surface. Rapid increases in fuel costs or a decrease in surface maintenance can cause not only local concerns but also state and national concerns.

### **Current Conditions**

There are more than 90 miles of public roads within the town of Calais (See the table below). Except for the seven miles of State Route 14, the Town has the responsibility to maintain all public highways in town. The roads, designated as Class II and Class III, are maintained for year-round passenger car travel.

<u>Roads in Calais</u>	<u>Classification</u>	<u>Miles</u>
	State Highway	6.9
	Class II & III	72.4
	Class IV	11.0

Currently, the Town has a Class IV Road policy that seems to be working. The Town will continue to support private maintenance of Class IV roads, and will, without obligation or undue expense, assist in that private maintenance at the Selectboard's discretion. The choice to assist a repair at any time on one road or section of a road in no way obligates the Town to provide the same assistance elsewhere or at other times.

Any permanent land use development must have access to the existing town highway network. Areas that are inaccessible because of excessive slope or other topographic features are excluded from permanent development. A developer receiving permission from the town to extend the road system in order to make inaccessible land accessible shall, at the developer's expense, build

a road that is at least up to Class III standards. However, this policy shall not obligate the town to accept a developer's road easement. As it has been for the last eleven years, it shall continue to be the policy of Calais to not accept new roads or to upgrade Class IV roads unless there is great benefit to the town from such action.



The State is responsible for reviewing curb cut permit applications on any new development on Route 14. The Selectboard is responsible for issuing curb cut permits on all other Calais roads. Curb cut permits are governed by state law (Title 19 Vermont Statutes Annotated, Section 1111), and Calais' curb cut ordinance. Members of the Selectboard take into consideration the location of the proposed new driveway in relation to the property and the road. Selectboard members also consider the safety of the passengers leaving the new drive and of potential travelers of the road when making their decision.

A 1993 study of the town's roads by professional planning and road engineering consultants (the "Clauson Study")<sup>4</sup> and a second 2004 East Calais Village & VT Route 14 Transportation Study<sup>5</sup> both pointed out several problem areas within the road network. The authors of the studies identified issues of safety, capacity, congestion, and confusing traffic patterns as well as substandard roadway conditions as factors that contribute to the listed areas of conflict. The Route 14-Marshfield Road and Route 14-Lightening Ridge Road intersections raised the greatest safety concerns. Other areas were identified for lesser problems, such as inadequate bridge and culvert conditions.

Within the last two years, the Central Vermont Regional Planning Commission gathered statistics from traffic counts on several of Calais's traveled roads at the request of the Calais Planning Commission. The Town has archived these records to use as starting points for determining changes in traffic patterns and to help aid in determining our infrastructure needs as traffic demands change. The Calais Planning Commission has identified roads that impose maintenance challenges and extended growth challenges. In addition, the Calais Planning Commission has also acquired several different forms of maps showing natural resources, wildlife habitat linkages, soil types, elevations and road building challenges which should also aid in the decision making process of future infrastructure needs.

Because Calais is a bedroom community, the condition and quality of town roads play an important part in our daily lives. Eighty eight percent of our workers commute to employment either within or outside of Calais. Despite this and the fact that many begin their commutes at about the same time each day, 73% of all commuters drive alone, only 11.1% report that they

---

<sup>4</sup> Town of Calais Transportation Element for the Calais Town Plan, Stan Clauson Associates 9 July 1993, copy in appendices

<sup>5</sup> East Calais Village and VT Rte 14 Transportation Study, prepared for the Central VT Regional Planning Commission by RSG inc. May 2004, copy in appendices

participate in a carpool, and the remaining 3.8% use other means such as a bicycle, public transportation or walking. These statistics suggest that there are many opportunities for reducing traffic and other problems that are not being exploited.

### Profile of Selected Economic Characteristics: 2000

Data Set: Census 2000 Summary File 3 (SF 3) - Sample Data

Geographic Area: **Calais town, Washington County, Vermont**

Subject	Number	Percent
<b>COMMUTING TO WORK</b>		
<b>Workers 16 years and over</b>	<b>803</b>	<b>100.0</b>
Car, truck, or van -- drove alone	586	73.0
Car, truck, or van -- carpoled	89	11.1
Public transportation (including taxicab)	10	1.2
Walked	20	2.5
Other means	1	0.1
Worked at home	97	12.1
Mean travel time to work (minutes)	26.5	(X)

### Workplace Locations of Calais Residents - 2000 Census

Workplace Locations	Count	% of Total
Montpelier city Washington Co. VT	223	28%
Calais town Washington Co. VT	168	21%
Barre city Washington Co. VT	97	12%
Berlin town Washington Co. VT	78	10%
Waterbury town Washington Co. VT	31	4%
East Montpelier town Washington Co. VT	30	4%
Barre town Washington Co. VT	29	4%
Burlington city Chittenden Co. VT	24	3%
Northfield town Washington Co. VT	10	1%

Source: VT Department of Employment and Training

Within the last few years, fuel prices have skyrocketed and many of us are forced to question how we travel to work, where we travel to, and how we can reduce our overall travel costs. As a town, we need to question whether people will choose to move closer to work, decide to work from home, or figure out how to afford to continue to work at the same locations if the cost of travel continues to outpace annual increases in income.

### Issues

The greatest issue we face today is the obvious challenge of traveling, due to the increase of fuel prices. We believe that we either need to find ways to reduce our individual expense of travel or we, as a community, need to find ways to help individuals to reduce travel by purchasing what we need locally and to find ways for members of the community to work locally. When travel outside of the community is necessary, we need to find ways to use shared resources and to take advantage of car pool opportunities or public transportation.

With the increase of fuel prices, other areas of transportation are also affected. The town does not have a significant supply of local road material to use in maintaining the roads without trucking in

loads of sand, gravel, and slate from other towns. This increase in cost becomes an increase in taxes to the residents of Calais who already are challenged with cost increases in every other aspect of our lives. Travel over our roads, with these additional heavy loads of material, increase the maintenance needs of the roads.

The state is also feeling the financial impact of the increase in cost of petroleum products. The funding is not available to properly maintain our state roadways and bridges. Our state funded roads, such as Route 14, have been quickly deteriorating to the poor condition in which many of them are. This poor condition puts on additional strain on the vehicle owner, whose repair and maintenance cost for owning a vehicle increases. Roads that contain many potholes can decrease the safety of traveling these roads. The potholes fill up with water, snow, and ice and are more difficult to clear up.

The increase in fuel also puts an additional strain on local businesses, such as our local stores. Delivery trucks are consuming the same amount of fuel at a higher cost. This additional cost must be either absorbed in the sale of the product or by reducing the amount of deliveries. Either scenario affects the Calais resident who is trying to increase her/his local spending.

Will these additional financial restraints force people to move closer to a large city? Will these restraints impact the growth of Calais by discouraging people to move here? Will these restraints change the reason why people choose to live in Calais and change the type of people who choose to move here?

We do not pretend to know the answers to these questions; however, we do believe that there will be significant impact and that our goals (below) outline a reasonable attempt to do what we can to help minimize the impact.

The Planning Commission believes that issues raised in the 1993 and the 2004 studies of town roads are still valid. Within the last two years, some of the recommendations from the two studies have been implemented. Signs have been added and moved, speed limits have been reduced and approaches to intersections have been slightly changed. However, the following should still be discussed and worked on during the time period of this plan.

What additional roads or sections of roads, if any, should be paved or otherwise improved? Some residents believe that paving, widening, regrading or rerouting certain roads is desirable; others do not. Some residents believe that such changes are inevitable; others think the town can, and should, decide which roads we want to "improve" and which roads we want to leave tree-lined, narrow, and unpaved -- essentially unchanged for the foreseeable future.

What, if anything, can be done by the Town to address the two most serious problem intersections? There is widespread agreement that the intersections of Lightning Ridge Road and of Marshfield Road with Route 14 remain the most serious traffic problems in town.

## **EAST CALAIS VILLAGE STUDY AREA**

*“The Marshfield Road intersection is characterized by the ambiguous layout around the church which impinges on safety and capacity, and sightlines and level stopping lines at Route 14 are poor.”* - Calais Town Plan – Transportation Element, 1993

*“The lack of pedestrian walkways in the East Calais village center produces undesirable conflicts between vehicular traffic and pedestrian traffic. Sidewalks and traffic calming should be*

*considered. The Route 14 intersections with Marshfield Road and Moscow Woods Road should be reconstructed. Consideration should be given to establishing a park-ride lot on Route 14 in Calais.*” - Central Vermont Regional Transportation Plan, CVRPC, 2003

## **VT 14-LIGHTENING RIDGE ROAD-MAX GRAY ROAD INTERSECTION**

*“At the Lightning Ridge Road intersection, there are poor sightlines and extra traffic owing to the presence of the elementary school.”* - Calais Town Plan-Transportation Element, 1993

*“It is recommended that the intersection of Route 14, Lightning Ridge, and Max Gray Road be regraded and/or relocated to improve sight distance and motorist safety. The pavement condition is poor in the vicinity of this intersection.”* - Central Vermont Regional Transportation Plan, CVRPC, 2003

What other transportation-related activities should the town engage in or encourage? While it seems unnecessary for the Town to put effort in this planning period into ideas for air, rail, or other means of mass transit, it is now time to explore how we might encourage carpooling or ensuring that those without reliable transportation might be assisted.

Currently, traveling on foot or bicycle can be hazardous because of the design and implementation of roads, yet the desire to do so by many individuals still exists and even increases. How does the Town create paths or widen roads to allow for safer travel on foot or by bicycle?

### **Goal 1 - Promote a safe, year-round system of town roads.**

#### **Plan of Action -**

- a. The Town should consider the issues raised in the Clauson Study and the 2004 East Calais Village & VT Route 14 Transportation Study in granting development or curb-cut permits that are near the dangerous intersections.
- b. The Town should promote improvements in the approach and sight distances whenever road construction is undertaken near the determined dangerous intersections.
- c. The Town should promote an agenda of improvements in Route 14 as the State carries out road construction.
- d. The Town should promote pedestrian and bicycle margins adjacent to the roads for Class II roads and Route 14 in the Town of Calais. When roads are repaved, the roads should be widened to allow safe travel of pedestrians and bicycles.
- e. The Town should add crosswalks across VT 14 in front of the General Store and across Moscow Woods Road.
- f. The Town should encourage tree canopies as a traffic-calming device where appropriate. Tree canopies slow traffic because of the perception of a narrower road. The Town will work with the state to address specific, immediate and long-term safety issues due to the continuing deterioration of State paved/maintained roads such as Route 14.

### **Goal 2 - Develop support systems for alternate forms of commuting.**

#### **Plan of Action -**

- a. The Town should identify and promote appropriate alternate transportation options, including the development of park and ride lots, van-pooling and greater use of GMTA. The Town shall support the efforts of local, regional, and state organizations in providing alternative

transportation opportunities, and will welcome opportunities for setting aside areas for park-and-rides when they become available.

- b. The Town should develop recommendations for alternative forms of transportation to be included in the Regional Transportation Plan.
- c. The Town should identify any state programs that support carpooling and notify the Calais community of these programs.

### **Goal 3 - Encourage preservation of scenic roads and their historic and aesthetic qualities.**

#### **Plan of Action -**

- a. The Town should inventory the town's scenic roads for inclusion in the Vermont Scenic Roads Program or protection through local ordinance.
- b. The Town should develop policies and programs for the preservation and enhancement of town roads such as programs to encourage the preservation of tree canopies and the planting of trees along appropriate stretches of town roads, private roads and pedestrian walkways, as well as zoning, development and historic preservation guidelines that preserve and enhance the scenic beauty of town roads.
- c. The Town should protect the public's interest in Town rights-of-way and trails, and will support appropriate private efforts to maintain this valuable public resource.
- d. The Town should make every attempt to identify all Ancient Roads in Calais before July 1, 2009.

### **Goal 4 - Develop capital improvement planning for transportation.**

#### **Plan of Action -**

- a. The Town should annually prepare the transportation element of the capital improvement and equipment plan that is consistent with the Town Plan and develop a budget to implement the plan;
- b. The Town should significantly alter roads only after public hearing and a clear showing that the alterations are necessary.
- c. The Town should look for ways to produce road material locally when appropriate and other ways to reduce the cost of transporting material long distances.

### **Goal 5 - Transportation Design**

#### **Plan of Action -**

- a. The Town should ensure the provision of safe and economically maintained roads for general use of the public.
- b. The Selectboard should have a policy for building and accepting new roads.
- c. The Town should develop a safe and efficient transportation infrastructure plan.
- d. Road design should support the character of the neighborhood or area.
- e. The Selectboard should identify Class 3 roads with troublespots that limit traffic capacity and growth

## **Regulatory Guidance**

- a. No new development or construction thereof may unduly burden the transportation system or worsen existing problem areas of that system.
- b. Encourage the creation of park-and-rides by including this in the permitting process of subdivision and development where appropriate (e.g., major roads such as Route 14).
- c. Take into consideration the protection of roads and trails when considering new development.
- d. Encourage the development of gravel pits for Town use.
- e. Include upgrades and maintenance of transportation infrastructure in any efforts to expand Village Districts.

## **C. UTILITIES/FACILITIES**

### **Electricity and Communications**

#### **Introduction**

Adequate and reliable electric and communication services are indispensable to a healthy and prosperous community.

#### **Current Conditions**

The vast majority of residents are served by three electric distribution utilities, although some form of alternative energy system powers a number of households.

The Washington Electric Cooperative lines serve most of the town with single-phase distribution. Three-phase power is available along the County Road corridor up to the Maple Corner substation area and in the immediate vicinity of the Calais Elementary School. While the Washington Electric Coop has no plans to extend three-phase service to new areas, it is rebuilding some existing single-phase distribution circuits in order to increase reliability of the local system. The Washington Electric Coop will relocate them closer to town highways to make them more accessible for maintenance and repair. Accordingly, the Washington Electric Coop believes that the inaccessibility of many lines that run through wooded areas away from roads has led to major delays in restoring service following some storm related power outages.

Green Mountain Power serves customers along the Route 14 corridor from East Montpelier to East Calais Village. Green Mountain Power does not provide any three-phase power services within Calais. Hardwick Electric Department serves areas in the north border of Calais

Although not an electric distribution utility, Efficiency Vermont<sup>6</sup>, the statewide energy efficiency utility, provides an array of energy efficiency services. Under these "demand side management programs", electricity customers may receive a variety of energy efficient appliances and conservation services at reduced prices. These programs allow eligible customers to lower energy bills and the utilities to avoid purchasing expensive additional energy.

The telecommunications industry continues to change rapidly worldwide. New cellular telephone and broadband services are enabling Calais residents the ability to "telecommute" and run home

---

<sup>6</sup> <http://www.encyvermont.com/pages/>

businesses more effectively and give us enhanced access to people and information from our homes, schools and businesses.

## **Issues**

Location of utility poles can affect the scenic quality of an area and is of concern to Calais residents. Relocation of utility lines to the roadside raises issues of possible adverse impact to the aesthetic and scenic qualities of our rural back roads. Occasionally the power company erects a new pole and does not remove the old pole. In some cases the telephone cable remains on the old pole and the electric service wire is moved to the new pole.

The absence of three-phase power in most sections of town may be a deterrent to development of businesses that need large electric motors. What, if anything, the town could do to affect the utilities decisions regarding both of these matters should be explored.

Cellular telephone access has become widely available. However, with the increasing demand for cellular capabilities comes the increasing need for cellular towers. The placement of cellular towers is a planning issue of some concern throughout Vermont.

While we in Calais want and expect good cellular service, we also expect the placement and design of new facilities to be guided by a respect for the integrity of the Region's landscape and compliance with microwave emissions standards. As such, it is important to balance aesthetics, signal quality, health, and business and personal needs when deciding whether and where to build new towers and other facilities. The Federal Telecommunications Act of 1996 does not allow local government to prohibit the construction of wireless facilities on a town-wide (or city-wide) basis, or to make regulatory barriers so onerous as to effectively block service. However, municipalities do have the right to place reasonable requirements and restrictions upon such facilities in order to protect community character and the environment and encourage the efficient use of resources.

Internet services have become an integral part of everyday life relied upon by business, emergency services, and the public. Clearly, the ability to communicate with almost anyone, from almost anywhere, at almost any time brings added convenience and security to our lives. Calais has several Internet providers, and high-speed connections are now available to many residents. However, residents in large parts of the town, chiefly on dirt roads, still rely on dial-up connections over telephone wires - a slow and inconvenient process. This is a concern for residents of those locales and an impediment to economic development and energy saving activities such as telecommuting. Fortunately, the State has recognized the importance of this issue and is taking steps to address it. A Local Wireless Internet Service Provider is slowly making high-speed internet available to some dirt road areas.

**Goal - To have electrical and communication service throughout the town adequate to meet the town's business and residential needs in a manner that is sensitive to the town's existing natural beauty.**

## **Plan of Action -**

The Town should:

- a. as the need arises, represent the town's general goals as expressed in the Calais Town Plan in actions before the Public Service Board and actions under Act 250 that significantly affect the town;
- b. explore the possible ways the town could affect the provision of three-phase power.

- c. Explore the possible ways the town could affect the provision of enhanced communication services;
- d. continue to work with power companies on location of poles; and
- e. continue to work with the power and telecommunications companies to encourage maximum use of existing utility poles and removal of unnecessary poles.
- f. The Calais Planning Commission should examine our telecommunications regulations to ensure that they provide for an expedited permit process for small scale facilities.
- g. The Calais Planning Commission should consider revising the existing Telecommunications regulations based on revisions to the models we originally used.
- h. The Town should attempt to work with service providers to identify appropriate locations for the construction of new tower (or other facilities) necessary to achieve adequate coverage as well as locations that are not appropriate for new towers. Calais will act to implement the results of this effort through its participation in the Act 250 process.

### **Regulatory Guidance -**

- a. The location or relocation of utility lines shall minimize environmental or aesthetic impact, especially if lines are to be located alongside Calais' scenic roadways or in designated historic districts.
- b. Telecommunication facilities should be sited, designed, maintained and operated so as to minimize negative impacts on natural, cultural and scenic resources. Use of stealth design and/or use of existing structures are encouraged where appropriate.
- c. The policies of this Plan addressing ridgeline and hilltop development (see Land Use Element, Upland District) are intended to apply to telecommunication facilities.
- d. Permits for tower facilities shall require permit holders to accommodate additional users, appropriate to the structure, at a fair market rate.
- e. Permits for towers should require a financial mechanism to ensure their removal by service providers should they be abandoned or rendered obsolete by advances in technology. Processes for establishing bonds should take inflation into account as many years can elapse between construction and removal.
- f. Applicants must demonstrate that telecommunication facilities comply with FCC emission standards in order to protect public health and safety
- g. New towers shall be constructed in areas served by existing roads or trails. Access roads should be designed to minimize their impact on scenic, agricultural, forestry, and natural resources.

## **Public Water Systems**

### **Introduction**

A sufficient supply of potable water is critical to our community. Without it, new development cannot occur and existing development is valueless.

### **Current Conditions**

Any water system serving over 25 persons is regulated under the Safe Drinking Water Act as a public water system. East Calais Village is served by a public water system owned and operated by the East Calais Fire District #1. The elementary school system is also a public water system. The rest of Calais has individual or shared dug wells, drilled wells, or springs. There is little data available regarding the adequacy or quality of the water from these individual or shared systems.

The East Calais system dates back to the early 1900's. In the 1940's the water system was sold to the proprietors of a local furniture factory who operated the system as a private water company

until 1968 when the East Calais Fire District #1 was formed to purchase the aging system to improve, operate and maintain it.<sup>78</sup> The water system currently serves approximately 52 connections. The system's source consists of a series of two springs located in an upland groundwater discharge area northeast of the Village. The springs are piped to a two cell, poured in-place concrete reservoir. A stand-by chlorinator which, when needed, can chlorinate the water as it enters the reservoir. The 4" PVC water main from the reservoir to the village was replaced in 1996. The balance of the distribution system dates from improvements made in the 1970's.

Water quality is generally excellent and the springs have historically provided sufficient quantities of water but their actual capacity is not known. A 1993 engineering study concluded that the district's existing springs would meet the future needs to 2032, however, during the dry summers of 2001 and 2002 the system was forced to ration water. Based on meter readings the usage is approximately 8,000 gallons per day. Long term daily monitoring would be necessary to establish a better estimate of the reliable yield of the springs. Based on the current number of connections, State regulations require a reliable yield of 10,970 gallons per day. Therefore, the water system may not be able to receive approval for additional connections without further analysis of the yields of the springs. Between 1980 and 1990 the system grew by three new connections. Between 1990 and 2000 there have been no new connections.

## **Issues**

In Calais, we rely almost entirely on groundwater for potable water and the most common threats to groundwater are from failed septic systems, agricultural runoff, leaking residential and commercial underground storage tanks, and the improper disposal of hazardous materials.

Because East Calais Village is served entirely by on-site septic systems, many of which are on small lots, the public water system serving the village is critical. The protection of the system's source springs from any contamination is, therefore, very important.

## **Goal 1 - Support the continued operation of the public water system by the East Calais Fire District to insure public health and the future viability of the Village.**

### **Plan of Action -**

The Town should:

- a. encourage and support public education efforts by the Fire District regarding importance of protecting the wellhead protection area; and
- b. support any efforts by the Fire District to develop additional sources of water supply.

---

<sup>8</sup> Fire Districts are special purpose municipal districts sanctioned by the state. They carry all the powers of a municipality, including the ability to tax the residents and properties located within the district boundaries. Town governments do not regulate and are not legally responsible for the actions of Fire Districts.

**Goal 2 - Protect all groundwater in town that is serving, or is reasonably expected to serve homes and businesses by individual or shared wells or springs.**

**Plan of Action -**

The Town should:

- a. maintain vigilant monitoring around public water supplies and in recharge areas;
- b. educate people about where their drinking water comes from, and how to protect the aquifer recharge area by preventing and managing any spills;
- c. carefully review new commercial activities in town to insure adequate setback from adjacent water supplies, adequate sewage disposal and adequate hazardous materials disposal;
- d. review and enforce regulations over commercial operations that could potentially affect the water supply; and
- e. review and, if necessary, update Calais' Land Use and Development Regulations to ensure protection of its groundwater and surface waters as an uncontaminated, high quality drinking water source. Maintain zoning to provide for compatible recreation, forestry and other limited uses of the land and resources in this area that will not result in the pollution of the water supply.
- f. consider aquifer protection overlay zones in the Zoning Ordinance and update these with the best available information and criteria for wellhead and aquifer protection;
- g. ensure the continued availability of a bountiful and sustainable supply of clean water for residential, agricultural, commercial and industrial use within the Town; and
- h. encourage the use of water conservation technologies, including low-flow toilets and fixtures, in developments and subdivisions in Calais.
- i. The Planning Commission should draft an ordinance to regulate commercial extraction of groundwater.
- j. The Planning Commission should explore other water supply mechanisms as needed to support compact development within Village or other districts.

**Regulatory Guidance -**

- a. Extraction of groundwater for commercial resale is prohibited until July 1, 2010.
- b. Protection of existing water supply should be given first consideration when examining proposals for new development.

**Sewage**

**Introduction**

The proper treatment of septic waste is essential to a safe, healthy environment. Today, we do a better job treating waste than ever before. As our population grows, sanitary disposal will become even more critical. More waste means more contaminants, pathogens, and byproducts, and our increased density means more people may be impacted. It is important then, that we provide for the safe and efficient treatment of sewage for current and future residents.

## **Current Conditions**

### **On-Site Facilities**

Calais is dependent upon on-site, underground septic disposal, as almost all of our population lives in rural areas outside of the service territories of any large-scale collection and treatment facilities.

### **Issues**

Most on-site septic systems require specific soils and site characteristics to enable the effective treatment of wastes. Where soils are impermeable, too permeable, shallow, or wet, or where slopes are steep, conventional septic systems are problematic and potentially hazardous. Accordingly, areas displaying such site limitations have generally not been recommended for development.

Restricting such areas, however, intensifies development pressure on those soils that can accommodate septic systems. Unfortunately, important agricultural land contains such soils. Clustered subdivisions with community septic systems may help overcome site limitations and simultaneously protect resource lands. Historically, many communities in Central Vermont enacted health or zoning bylaws to regulate the installation and engineering of new septic systems. These regulations usually required that soil be evaluated before a sewage system was built and generally permitted the following types of systems:

- septic tank with leach field or dry well;
- aerobic tank with leach field or dry well;
- septic tank with leach field or dry well and site modifications; and
- septic tank with mound.

Calais used to have a sewage ordinance administered locally. As of July 1, 2007, the Legislature created “universal jurisdiction” over wastewater and potable water supplies, closing the former “10-acre loophole” and requiring permits by the Vermont DEC Wastewater Management Division. Except where a municipality requests and is given delegation by DEC, municipalities may no longer adopt or administer local regulations on wastewater and potable water supplies. However, municipalities may prohibit construction under a zoning permit unless and until a wastewater and potable water supply permit is issued by the State. The innovative systems allowed under the new technical standards may allow historically “un-developable” land to be developed. This means that we should consider the impacts on health and safety, land use patterns and associated uses, and plan accordingly.

## **GOAL**

- a. The Planning Commission should revise the zoning ordinance to emphasize our concern with public safety and land use planning goals in the areas of sewage disposal.
- b. The Town should complete an inventory of existing systems followed by support for the inspection, upgrading, and improvement of existing and future on-site treatment systems.
- c. The Planning Commission should explore small-scale hybrid systems for villages or other densely populated centers, similar to that built for the village of Warren.
- d. The Town should explore connecting with the Plainfield system. The Plainfield Sewage Treatment Facility serves the Plainfield village area and Goddard College. It has a design

capacity of 0.125 mgd, an average daily flow of .57, and a committed reserve of 1,530 gallons per day and an uncommitted reserve of 66,053 gallons per day. (CVRPC Draft 2008 Plan.)  
e. The Town should consider exploring wastewater disposal mechanisms in sensitive areas, especially within shoreland and village districts.

## **Solid Waste Facilities**

### **Introduction**

The proper management and disposal of solid waste is one of the more important and far reaching challenges facing the region today. Everyone in Central Vermont - businesses, residents, and visitors - generates waste, often without thought as to its ultimate destination or impact. In 1987, the Vermont Legislature recognized serious health, economic, and environmental risks associated with disposal of solid waste, and adopted Act 78, Vermont's solid waste law. Act 78 challenged Vermonters to manage trash in a new way, and encouraged communities to develop management plans in accordance with the following hierarchy of goals: source and waste reduction, followed by re-use, recycling, and lastly, disposal.

### **Current Conditions**

Calais is a member of the Central Vermont Solid Waste Management District (CVSWMD), a municipal district serving 22 towns in Central Vermont. (<http://www.cvswwmd.org>). The District's funding is based on user fees and service fees.

The mission of the CVSWMD is to provide services, education, and leadership for residents and businesses in reducing and managing the solid waste stream, in order to protect public health and the environment. The District develops and implements programs, services, and provides incentives for solid waste reduction in its member communities.

The CVSWMD has adopted and committed to *Zero Waste*. Zero Waste is an internationally recognized movement to promote community awareness and systems oriented towards reducing the production of solid waste materials. Zero Waste cannot and will not eliminate all "discards". Rather, working towards a goal of Zero Waste means a focus to capture all of the resources in materials in the waste stream can be reused and recycled, instead of being buried in a landfill. Reducing waste "upstream" through good product choices, including types of materials, types of production, packaging and reduced toxicity are critical elements of a Zero Waste effort.

In addition to the CVSWMD, there are private haulers for curbside pickup that serve Calais.

### **Issues**

Act 78 also established requirements for public involvement in solid waste planning so as to develop strategies and systems which "over the long term (are) sustainable, environmentally sound, economically beneficial, and (which) encourage innovation and individual responsibility." Accordingly, this section of the Plan promotes individual responsibility, encourages innovation, and encourages local solutions for wastes generated in order "that decisions shall be made at the most local level commensurate with their impact." [24 VSA Chapter 117, 4302 (b)(2)] Besides addressing the priorities of Act 78, solid waste plans must be in conformance with State Solid Waste plans and compatible with Regional plans. Solid waste plans must also demonstrate what solid waste facilities and programs will be established and where facilities will be located in the

Region. In addition, plans should indicate who is responsible for facility management, and how the State's goals for recycling and waste reduction will be attained.

It is estimated that about 40% of the waste we generate is food and yard waste. Currently most of this is landfilled – a result that is both more expensive and wasteful than the better alternative of composting. Composting is a natural process of decomposition of organic materials. It is the biological process that allows leaves and grass clippings to degrade. Composting of the organic component of the solid waste stream could produce an end product that both saves landfill space and provides a useful soil amendment. Source-separated organics could be managed locally to produce a compost that would benefit local gardeners, farmers, and plant nurseries. There are several different types of processes/facilities designed to compost, dry, or land-apply municipal solid waste and organic materials. These include the following: organic composting facilities, municipal solid waste composting facilities, organic materials drying facilities, land application of septage and sludge, and backyard composting units.

We encourage the concept of managing solid waste as close to the source as reasonable with a preference given to local solutions to waste management.

**Goal - To promote safe, sound, cost effective and efficient solid waste management.**

**Plan of Action -**

- a. The Town should, through individual efforts and through membership in Central Vermont Solid Waste Management District, encourage re-use, recycling, and waste reduction, along with proper management and disposal of solid waste, to help minimize detrimental impacts on surface and ground waters, on air quality, on the soil, and on plant, animal, and human communities. Maximum efforts should be placed on waste reduction. For both environmental and economic reasons, Calais supports waste reduction as a top priority of the Region, and the concept of “zero waste” as a means of accelerating solutions.
- b. The Town should encourage the development of low-tech, low cost, environmentally sound waste management systems;.
- c. Each individual or business in the Region should bear the cost of proper management of the waste generated. Recycling efforts should move in the direction of being financially self-supporting and locally controlled whenever possible.
- d. Recycling facilities and programs should promote individual participation and responsibility. Communities are encouraged to adopt mandatory recycling ordinances at the local level where no waste district ordinance exists. The convenient and de-centralized placement of local drop-off facilities is encouraged.
- e. The Town should encourage composting of residential, commercial, and institutional organic waste in order to maintain the materials' highest re-use value. Composting efforts should move toward being environmentally sound, financially self-supporting, and locally controlled.

## **Child Care**

### **Introduction**

Quality and affordable early childhood care and education benefits families by preparing children for school while enabling parents to work and provide income. It benefits businesses' financial bottom line by attracting, expanding and retaining a quality workforce and creating more reliable, productive employees. Furthermore, early childhood care and education facilities are businesses themselves and their existence expands local and regional economies directly through the hiring

of workers and purchase of goods and services. Despite the economic and social good created by childcare services, Calais currently has a shortage of such facilities. The number of childcare providers in Calais varies widely over time as child care providers move in and out of the field of child care.

## **Issues**

In Central Vermont, there are 87 registered home care providers and 22 licensed care providers. However, there are only seven “quality” providers (licensed with 4 or 5 STARS in the Vermont Step Ahead Recognition System<sup>9</sup> and/or with national accreditation). The demand for quality early childhood care and education has outpaced the supply for many years and is projected to continue. This is a critical unmet community need. The high cost of childcare also keeps some residents of the Region out of the workforce. Simply put, for too many families the cost of early childhood care and education outweighs any potential income gain. Even moderate-income families that do opt for childcare often pay a large portion of their total income for these services and consequently struggle to get ahead.

**GOAL - To ensure the availability of quality and affordable early childhood care and education and to integrate childcare issues into the planning process.**

## **Plan of Action -**

- The Town should:
- a. continue to look for ways of meeting our statutory responsibility to plan for quality early childhood care and education and assist in this effort upon request;
  - b. form a group to assess local barriers (regulatory or otherwise) to the provision of childcare services and to support them in taking action to remove or reduce those barriers;
  - c. consider undertaking, in partnership with local advocacy organizations, a needs assessment for quality early childhood care and education services; identify the economic impact on the Region; and determine how employers, public education, and providers can work together to reduce the financial burdens on families and raise the salaries of teachers to a livable wage as a minimum; and
  - d. encourage the location of childcare facilities in existing settlements, near residential clusters, schools, and along public transportation routes. Such locations can help reduce traffic, energy consumption, and the overall financial cost of childcare for families.

## **D. LAND USE**

### **Introduction**

Calais has maintained its rural character despite the fact that the number of houses in town has doubled from 1970 to 2000. Although land in agricultural production continues to decrease, and residential growth is up, much of the town remains a patchwork of woods, fields, small villages, ponds, streams and wetlands. Our goal is to guide growth in a manner that preserves this rural character and minimizes impacts on natural resources. Instrumental to this vision is the

---

<sup>9</sup> The Step Ahead Recognition System (STARS) is Vermont’s quality rating system for childcare, preschool, and afterschool programs. <http://www.starsstepahead.org/>

protection of our town’s working landscape and the natural resources upon which it is dependent, as well as the focus on our villages as vibrant centers in which people of all ages and income levels can live, work and do business.

It is in Calais’ long-term best interest to sensibly govern the use of land through the Calais Land Use & Development Regulations, so that the land may continue to provide opportunities for future generations.

## Current Conditions

Calais is a relatively small rural town in north-central Vermont. The Resources: Agricultural, Well-source, Wildlife, and Forest Map, a copy of which is in the Appendix to this Plan, shows the current land use in town.

Calais is hilly, but not mountainous. Elevations range from about 700 feet along North Montpelier Pond to almost 2200 feet on Hobart Mountain in the northwest corner of Town. Its relatively gentle terrain has been conducive to the formation of agricultural soils, particularly along and east of Route 14 and the Kingsbury Branch.<sup>10</sup> Although the amount of farming in Calais has declined, the landscape is still shaped by an agrarian history. Current land use patterns – a patchwork of fields and forests, interspersed with homes, and small villages, with several ponds, wetlands and streams – are very much in keeping with the bucolic image of Vermont.<sup>11</sup>

The more fertile, lower elevations near Calais' streams and lakes have historically been the site of the most human activity. However, growth in Calais has been more widespread in recent decades. Settlement patterns are now expanding into upland areas, particularly along the upper County Road, Bayne Comolli Road, Jack Hill, Max Gray and Lightening Ridge Roads. With the exception of the four villages, residential development is scattered throughout the Town, with growth extending linearly along all roads. Such growth may not be in the best interest of Calais’ rural nature but is likely to continue if there are no incentives to alter the pattern.

Most of the land in Calais is forested or open. The Central Vermont Regional Planning Commission reports that actual land use breakdowns in Calais in 2007 were as follows:

<b>Calais Land Use in 2007</b>		
Forest Land	17,737 acres	71.0%
Agriculture/Open Land	4,082 acres	17.0%
Scrub/brush	659 acres	3.0%
Residential	494 acres	2.0%
Other Developed Land	94 acres	.4%
Water and Wetland	1,641 acres	7.0%

This natural setting is partly responsible for the character of our community. The Calais landscape offers recreational activities, solitude, wildlife habitat, aesthetic enjoyment, as well as forestry, agriculture, and other economic opportunities. Accordingly, judicious use of natural areas, surface and groundwater, floodplains, primary agricultural lands, woodlands, core forests and other important wildlife habitats, and other vulnerable resources is necessary. (See the Natural Resources Section of this Plan).

---

<sup>10</sup> Central Vermont Regional Planning Commission, *Calais Development Potential and Buildout Analysis*, page 2 (Dec. 2007).

<sup>11</sup> *Ibid.*

The current land use policy in Calais is to preserve this rural character by increasing density in the villages, discouraging scattered development, and encouraging planned development throughout town.

## **Buildout Analysis**

The Central Vermont Regional Planning Commission (CVRPC) completed a buildout analysis for Calais in 2007.<sup>12</sup> In that analysis, CVRPC found that the town has significant development potential – a potential of 1252 total new housing units under current zoning constraints.

Although it is hard to predict how much Calais will grow in the coming years, it is clear that the number of housing units in Calais has been growing at a significant rate since 1970.<sup>13</sup> Housing projections made by CVRPC indicate that the Town of Calais’s “fair share” of regional housing needs between 2006 and 2020 will be approximately 306 new units.<sup>14</sup>

Under current zoning, most of the growth will occur in the Rural Residential District rather than in the Village Districts, despite the fact that the Calais Town Plan is to focus growth in our villages and preserve the rural character of our town.

While Calais’s landscape still generally reflects the historic settlement patterns, the Town acknowledges that it is experiencing scattered residential growth which threatens to undermine community character. Alarming, the buildout modeling predicts an exacerbation of this trend absent any regulatory changes or large scale conservation efforts. It predicts little growth for Calais’ Villages, while 78 % of future development is allocated to the Rural Residential zone. Accordingly, it is important for the Town to address issues of residential sprawl, incremental large lot development, resource protection and village vitality. This study may be a useful first step in this effort insofar as it depicts the direction in which existing regulations may be taking the community, demonstrates how various parts of Town may be impacted by future growth, and examines alternate development strategies. Though it is impossible to know the future in any precise way, it is probable that Calais’ growth will continue for many years to come. The challenge for the community is how to respond to change in a way that affords citizens the highest quality of life possible and responds to human needs and environmental imperatives.<sup>15</sup>

The buildout analysis demonstrated that to avoid impacts on valuable natural resources, development must be focused in the village districts and the rate of growth reduced in the rural residential and other outlying districts. According to CVRPC, the Town’s current zoning and subdivision regulations are not up to the task of managing likely growth in the best interests of Calais residents. Fortunately, the Town has a variety of options to

---

<sup>12</sup> The Calais Buildout Analysis was funded by a Municipal Planning Grant from the Vermont Department of Housing and Community Affairs.

<sup>13</sup> Central Vermont Regional Planning Commission, *Calais Development Potential and Buildout Analysis*, page 12 (Dec. 2007).

<sup>14</sup> Central Vermont Regional Planning Commission, *Regional Housing Distribution Analysis* (2006).

<sup>15</sup> Central Vermont Regional Planning Commission, *Calais Development Potential and Buildout Analysis*, page 12 (Dec. 2007).

consider to better serve the goals of preserving rural character and natural resources, and to focus growth in our Village Districts.

## **Zoning**

The Calais Land Use & Development Regulations establish general requirements for development and subdivision, as well as regulations for specific land use districts, as discussed below. Current allowable densities in Calais range from approximately 4 lots per acre in the Village Districts, when conditions allow, to a 25-acre minimum lot size in the Upland Overlay District. Most of Calais (72% of land area) is in the Rural Residential District, which, as of 2008, has a 3-acre minimum lot size.

**Rural Residential District** (17,854 acres) – The purpose of the rural residential district is to provide for development of residences and home businesses in ways that minimize impact on open spaces, ridgelines, wetlands, wildlife habitat, prime woodland and agricultural soils, ecologically sensitive areas, and scenic areas. To this end, development should be clustered at the edges of open spaces and agricultural lands in a way that leaves the open land available for farming or recreational uses. Development should be below rather than on ridge-lines in order to protect the scenic quality of our rural landscape. Driveways should be shared when possible and located close to edges of open spaces to minimize visual impact, erosion, and entrances onto the public road. Buildings should be oriented to the road to maintain the historic development patterns in Calais. Large buildings and parking lots, which are not in keeping with the scale of development in Calais, are allowed only when screened to minimize visual impacts.

Development density in the rural residential district is currently limited to one unit per three acres without a Planned Unit Development. Some non-residential uses will be conditionally permitted if the Development Review Board is assured that the general land use conditions will be satisfied.

A significant portion of the Town lies within this zoning district. Most of the development and subdivision in the past decade has occurred in this district<sup>16</sup>.

**Village District** (660 acres) – The purpose of the village district is to support the role of the villages as the foci of social, residential, and some economic activities of Calais. The village should contain relatively high-density residential development as well as businesses and public buildings sized to provide services to the Calais community and environs and compatible with the needs of the town. Lot sizes should be as small as possible provided that sewage and water needs can be accommodated. However, the soils and the lack of sophisticated sewer and water systems do not enable the kind of village density that we might like to encourage. As septic technology advances, these areas should be developed more densely than current soil conditions allow.

Buildings in the village district should be built at a scale and orientation that is compatible with current development in the village. Multi-unit residential and non-residential development may be permitted as conditional uses if the Development Review Board is assured that the general

**Kent Tavern Barn**



<sup>16</sup> New Housing 2003 – 2008 map is in the appendix

land use conditions will be satisfied. Such development, including any associated lights and signs, should be scaled and in keeping with the traditional social and physical character of the village.

The district has no minimum lot size requirement, but does mandate frontage (125 feet) and setbacks, including a 40-foot front setback, that effectively make the limit just over ¼ acre (11,250 s.f.)

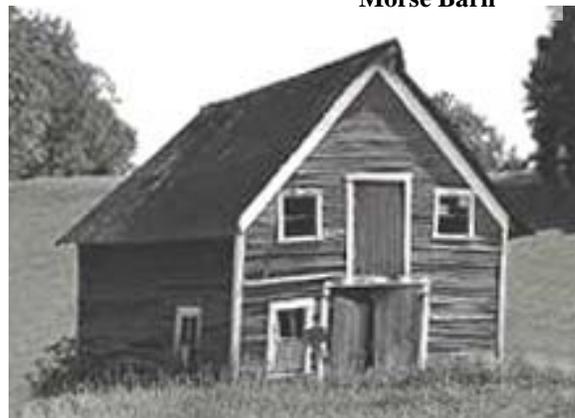
**Resource Recreation District:** (1,936 acres) - The purpose of the Resource Recreation District is to protect the natural resource value of those lands which are essentially undeveloped, are important because they contain wildlife and wildlife habitat, could have high potential for commercial forestry use or other extractive enterprise, are unsuitable for commercial, industrial or agricultural development, or are necessary to protect groundwater and aquifers, a fragile ecology, or significant natural recreational or scenic resources. Low-density residential development of no more than one family unit per 10 acres will be permitted. Conservation, forestry, and limited outdoor recreation uses will also be permitted. No additional class II or class III highways will be built in this district.

**Shoreland District:** (1,401 acres) - This district generally includes lands within 800 feet of water bodies 20 acres or more in area (Bliss Pond, Curtis Pond, Nelson Pond, North Montpelier Pond, Mirror Lake or Number 10 Pond, and Woodbury Lake). The distance may vary in either direction to utilize natural barriers such as ridges to clearly delineate the district, as it does in the area between Curtis Pond and the Maple Corner village district. The shoreland district regulations protect the ecological, recreational, and aesthetics values of the water bodies and shoreland areas, and prevent their overdevelopment through safeguards such as setback and vegetative buffer requirements and measures to minimize soil compaction and the creation of impermeable surfaces. This helps keep the quality of the town's open waters good for swimming and the support of aquatic life, consistent with the goals of this plan.

**Upland District:** (2,853 acres) - The purpose of this district, which includes all areas over 1,500 feet elevation above mean sea level within the Town of Calais, is to protect sensitive upland areas from the adverse effects of high-density and other inappropriate development. These areas are generally characterized by steep slopes, rock outcrops and shallow soils, and include important headwater and aquifer recharge areas, large tracts of unbroken habitat, valuable timber and recreation land, and scenic hills and ridgelines, They are also generally remote from public services and facilities and as a result are difficult and costly to access. Minimum lot size is 25 acres and development must be sited to avoid impacts to the extent feasible for all conditional uses, which includes single-family homes.

Only agriculture, forestry, public parks, and some uses of residential buildings such as home child-care shall be permitted without review by the Development Review Board. Residential and seasonal dwellings, home industry, and a few other low impact uses will be conditionally permitted if the Development Review Board is assured that the development will have minimal impact on this sensitive area. Development in the upland district should be at an overall density of one unit per 25 acres.

**Morse Barn**



***Kents Corner-Old West Church Overlay District.*** The purpose of the Design Control District is to ensure the protection of the historic and architectural integrity of the Kents Corner - Old West Church Historic District. This area is regarded as an important asset both to the town and the state. Much of the design control district is included in the Kents Corner Historic District listed in the National Register of Historic Places. The district was added in 1979 to the Vermont Historic Sites and Structures Survey administered by the Vermont Division for Historic Preservation. Current zoning requires that all development in this district conform to design control guidelines, the Kents Corner Historic District Design Review Guide (revised 2008), intended to preserve the zone’s historic character.

The design control and review requirements of the Land Use and Development Regulations, including the most recent version of the Kents Corner Historic District Design Review Guide<sup>17</sup>, are hereby incorporated into this Town Plan.

***Flood Hazard Area Overlay District.*** The purpose of this overlay district is to regulate development of flood-prone lands. Development in these areas shall be designed and constructed to minimize the potential for flood damage. Currently the district consists of lands that have been mapped by the National Flood Insurance Program as in danger of flooding at least every 100 years. The maps are available at the Town Clerk's office.

***Subdivision.*** The Calais Land Use & Development Regulations also contain subdivision regulations intended to “guide community settlement patterns and to ensure the efficient extension of services and facilities as land is developed.”

## **Goal 1 - Preserve Rural Character, Open Land and Other Natural Resources.**

### **Plan of Action -**

The Town should:

- a. maintain the long-term viability of agriculture in Calais consistent with the goals for agricultural land use and protection of agricultural soils set out in the Agriculture section;
- b. revise zoning outside the village districts to discourage scattered development patterns and protect open space, agricultural soils and other natural resources, for instance, by increasing the minimum lot size or establishing of a maximum setback from the road in the rural residential district, the resource recreation district, or both; and
- c. encourage Planned Unit Developments<sup>18</sup>, which allow more dense development while minimizing impacts on agricultural soils, open land, and other natural resources.

## **Goal 2 - Encourage More Dense Development in the Village Districts.**

### **Plan of Action:**

The Town should:

- a. revise zoning to allow and encourage greater density in the village districts;
- b. encourage new sewage treatment systems or water supply systems, or both, that would allow more dense development in the village districts;

---

<sup>17</sup> see appendix

<sup>18</sup> <http://www.vpic.info/pubs/implementation/pdfs/22-PUD.pdf>

- c. consider expanding current village district boundaries, as explored in the CVRPC buildout analysis;
- d. provide more incentives to focus development in the villages, through zoning and other means;
- e. improve quality of life in villages by encouraging mixed-use development and redevelopment as well as encouraging land conservation and recreational opportunities in immediate proximity to villages; and
- f. explore ways to provide incentives for more small-scale commercial development in village districts so villages are more vibrant and attractive places to live, shop, and work.
- g. Consider creation of a new village district in the location explored in the CVRPC buildout analysis near Calais Elementary School, or elsewhere.

### **Goal 3 - Encourage Planned Unit Development.**

#### **Plan of Action -**

The Town should:

- a. provide information to Calais residents concerning the benefits of Planned Unit Development, which can allow density bonuses and greater return on land investments, while protecting the Town's rural character, agricultural soils, open space and natural resources; and
- b. explore other ways to encourage Planned Unit Developments.

### **Goal 4 - Encourage Ongoing Citizen Involvement and Continued Study.**

#### **Plan of Action:**

- a. The Town should ensure that the Calais community will continue to work to understand the forces that are changing our town and causing growth so that we can plan for growth in the best possible ways.

#### **Regulatory Guidance**

The rural character of Calais shall be preserved wherever possible. Rural character means the historic development pattern of densely built village centers clearly delineated from the surrounding, low-density rural residential area. The village centers should contain a variety of uses, including residences, businesses and public buildings (grocery stores, hardware stores, service stations and recreational facilities) sized to provide services to the Calais community. The rural residential district should contain open spaces, farms, and forests as well as residences, home-based businesses, and a few small-scale commercial and industrial establishments built in a way that is in scale with and respects the scenic rural character and working landscape of Calais.

Therefore, those designing new development outside of a village must attempt to site buildings at the edges of open spaces and below ridge-lines and to site road access so that a minimum of open space is consumed and road entrances are shared where possible. Planned Unit Developments (PUDs), as discussed further in the Housing section, offer opportunities to minimize impacts of development in more rural areas as well as in the village districts. Large-scale residential, commercial, or industrial development is not consistent with the rural character of Calais.

## E. NATURAL RESOURCES

### Introduction and Current Conditions

Calais has an abundance of natural resources. Almost three quarters of the Town is forest that provides a variety of benefits to residents: income from forest products; habitat for wildlife species; recreational opportunities for residents; and clean water by filtration of surface waters and recharge of groundwater aquifers. Plentiful wildlife also provides many benefits to the people of the town, including hunting, fishing, and tracking. In town, there are several identified natural areas which are known to contain rare, threatened, or endangered species of plants or animals or which support significant natural communities of plants or animals. There are several ponds, streams, and wetlands that provide opportunities for water recreation, wildlife observation, aesthetic enjoyment, and peaceful contemplation. Currently, our groundwater is plentiful, accessible, and potable. The town also has the physical geography and human development patterns that make it a scenic place to live.

**Forests and Farms:** Agricultural and forest lands provide many benefits - economic, aesthetic, recreational, and environmental. For example, these land uses can provide habitat for game and non-game wildlife, area for floodwater storage, watershed protection, scenic vistas, open spaces for a variety of outdoor pursuits, and increased self-sufficiency as local sources of food, wood products, and energy. In addition, these lands play an important part in Calais' economy, providing income to many.

According to a 1981 survey<sup>19</sup> of the town's 26,240 acres, 75% or approximately 19,680 acres at that time were forested. By 2007, the percentage of forestland had dropped slightly to approximately 71%.<sup>20</sup> Core forests – forests 100 meters from significant development – provide valuable and unique wildlife habitat for certain native species such as bobcat, black bear, and many migratory songbirds. Parcelization and development within contiguous forested areas reduces or eliminates the special habitat value of these areas. Core forests are discussed further, below.

A variety of development and economic forces are threatening our ability to maintain farming and forestry as important and viable uses of our land. Agricultural lands are particularly vulnerable to encroachment and conversion because they are generally level, cleared, and on good building soils. Fortunately, Calais appears to have many landowners committed to the preservation and good management of their resource lands. This is demonstrated by the high participation in Vermont's Current Use Value Appraisal Program<sup>21</sup> and the deeding of conservation easements to the Vermont Land Trust. The Use Value program provides that landowners who choose agriculture or forestry as long-term uses of their property may have that land taxed accordingly. In 2007, 118 parcels in Calais participated in the Current Use program, for a total of 11,910 acres

---

<sup>19</sup> *Forest Resource Estimate for Washington County*, Vermont Department of Forests, Parks and Recreation (1981).

<sup>20</sup> Central Vermont Regional Planning Commission, *Calais Development Potential and Buildout Analysis*, page 2 (Dec. 2007).

<sup>21</sup> Vermont Department of Taxes, Current Use Appraisal Program, Participant Tax Savings – Tax Year 2007 ([http://www.state.vt.us/tax/pdf.word.excel/pvr/reports/2008/CurrentUse\\_TaxSavingsReport.pdf](http://www.state.vt.us/tax/pdf.word.excel/pvr/reports/2008/CurrentUse_TaxSavingsReport.pdf)).

(approximately 44% of the town's total land area). In addition, nine landowners have deeded conservation easements totaling 1,523 acres to the Vermont Land Trust.

Agricultural soils and farming are discussed further in the Agriculture section.

**Lakes, Ponds, and Streams:** Some fifteen ponds of five or more acres are contained within, or partly within, the Town. The largest are Bliss Pond (46 acres), Curtis Pond (103 acres), Number 10 pond (77 acres), Nelson Pond (131 acres), and North Montpelier Pond (53 acres). Many of the ponds are accessible to the public and provide recreational opportunities such as swimming, fishing, canoeing, boating, and wildlife observation. Recognizing their importance, Calais has adopted shoreland zoning to protect the aesthetic and ecological qualities of its lakes and ponds.

Calais has many streams and brooks. The Kingsbury Branch of the Winooski River is the most significant, traversing the Town, from north to south along Route 14. Other streams include Pekin Brook, Dugar Brook, Still Brook, Carr Brook, Worcester Brook, Long Meadow Brook, and Beaver Meadow Brook. All of these are in the Winooski River Watershed and all of them have been designated by the State as "Class B" waters based on a 1988 study by the Agency of Natural Resources (ANR), Department of Environmental Conservation. Class B streams should "consistently exhibit good aesthetic value and provide high quality habitat for aquatic biota, fish and wildlife" and should be suitable for use as a public water supply with filtration, for irrigation and agriculture, and for swimming and recreation. To maintain water quality, protect wildlife habitat, and prevent soil erosion and surface runoff, the Calais Land Use and Development Regulations require a minimum riparian buffer of fifty feet on named rivers and streams, and of twenty feet on all other rivers and streams.<sup>22</sup>

**Wetlands:** Wetlands are inhabited by a unique variety of plants and animals and purify surface and ground waters, store floodwaters during wet periods, and replenish water supplies in dry weather. Wetlands are also important for the survival of waterfowl and other birds, mammals, and fish. Wetlands are often threatened or destroyed by building and other human activity. While there are many wetlands in Town that show up on the federal wetland inventory maps, there are fifteen identified wetlands in Town. They are:

- |                        |                       |
|------------------------|-----------------------|
| Hawkins Pond           | Little Mud Pond       |
| Blue Pond              | Curtis Pond           |
| Nelson Pond            | Watson Pond           |
| Wheelock Pond          | Bliss Pond            |
| Number 10 Pond         | Sodom Pond            |
| Woodbury Lake          | Chickering Bog        |
| Little Pond            | North Montpelier Pond |
| Bliss Pond Cedar Swamp |                       |

In addition, shrub swamps form an important wildlife corridor along the Kingsbury Branch and Pekin Brook.

The U.S. Army Corps of Engineers has regulatory authority over wetlands. In addition, significant wetlands are regulated by the Agency of Natural Resources' Department of Environmental Conservation.

---

<sup>22</sup> Calais Land Use & Development Regulations, Section 3.13.

**Groundwater:** The protection of our groundwater resources is crucial. The community is dependent on underground sources for domestic water supply. Pollution or significant depletion of groundwater aquifers would be a hardship for many years to come and would adversely affect streams and aquatic biota, as well as our drinking water supply.

Major groundwater deposits in the region are most often found in areas underlain by stratified drift deposits (permeable sand gravel of glacial origin) along watercourses in valley areas. In Calais, the areas of greatest potential yield occur along the length of Kingsbury Branch and Pekin Brook.

Vital to the protection of groundwater resources is the proper use of recharge areas. Aquifer recharge areas contribute to subsurface supplies. These consist of the land area directly above the aquifer through which precipitation percolates, as well as upland areas from which runoff drains towards the aquifer. Because land uses which have the potential for spills of toxic substances may pollute the groundwater aquifer, the regulation of land uses in recharge areas is necessary for aquifer protection.

The Resources map in the appendix shows the wellhead protection areas (WHPA) in town that have been designated by the State. Vermont's groundwater protection law (10 V.S.A. Chapter 48) sets forth general policies for WHPAs and the ANR's Water Supply Division has published recommended land use guidelines for WHPA's. It is the policy of the Town that such policies and guidelines be followed.

**Floodplains:** Floodplains are vitally important to the health of rivers and streams and the safety of the community. They serve as a safetyvalve during heavy rains and snowmelts by giving runoff a place to dissipate. By reducing the volume and velocity of water in streams and rivers during these flood-prone periods, floodplains also reduce the damage that can be caused by floods. Floodplains can also improve water quality by filtering stormwater before it reaches rivers and streams. In addition to the ecological functions of floodplains, they pose limitations for development due to the hazards associated with periodic flooding. Developing or placing fill in the floodplain can cause harmful effects on downstream properties during a flood, as well as harmful effects on the stream channel. The economic benefit of locating a structure in a flood hazard zone is usually outweighed by the risks of damage to or destruction of that building.

Calais' principal flood hazard zone occurs along the entire length of the Kingsbury Branch. Some of the smaller tributaries are also subject to flash flooding.

The Town has adopted floodplain regulations as part of its zoning bylaws that conform to federal requirements for participation in the National Flood Insurance Program (NFIP). These regulations apply to land within the 100-year flood zones depicted on the federal Flood Hazard Boundary Maps, and are intended to protect life and property and allow property owners to obtain flood insurance, and mortgages, at affordable rates. The 500-year floodplain indicates areas of lesser flood risk, but it is still in a zone of potential hazard. According to the Vermont Agency of Natural Resources, the NFIP-designated floodplains are a useful management tool but do not necessarily protect against flood damage from fluvial erosion, which causes the majority of flooding damage in Vermont.<sup>23</sup> The Agency's River Management Program offers Fluvial

---

<sup>23</sup> Agency of Natural Resources, Department of Environmental Conservation, River Management Program, *Municipal Guide to Fluvial Erosion Hazard Mitigation* (Feb. 14, 2008) ([http://www.vtwaterquality.org/rivers/docs/rv\\_municipalguide.pdf](http://www.vtwaterquality.org/rivers/docs/rv_municipalguide.pdf)).

Erosion Hazard mapping services to towns, to help them protect against both inundation and erosion flood hazards.

Through its participation in the National Flood Insurance Program, Calais has acknowledged the functional importance of its flood-prone areas. This program provides flood damage relief to communities foresighted enough to enact ordinances regulating floodplain land use. The Town should also consider whether it is appropriate to ask the Agency of Natural Resources' River Management Program to review and map the Town's fluvial erosion hazard areas.

**Mineral Resources:** Historically several quarries operated in Adamant. These yielded granite, quartz, epidote, apatite, calcite, graphite, and zircon. Although there were no active stone quarries in town for many years, a wall stone quarry off the County Road obtained permits to begin operation in the spring of 2003. There are also a few sand and gravel extraction operations existing along Route 14 in the northern part of town.

Sand and gravel deposits in Calais are glacial in origin and generally follow the courses of streams and rivers. While these deposits may yield important and needed materials for road and building construction, Calais' development patterns render their extraction a matter of some sensitivity. It is important that care be taken in the siting and operation of development so that future extraction of resources is not foreclosed.

**Wildlife Habitat:** Viable habitat is the single most important survival need for many species. Residents value native wildlife for a variety of reasons - hunting, aesthetic appreciation, food supply, and indirect income.

White-tailed deer wintering ranges and black bear habitat zones, which have been identified and mapped by the Vermont Fish and Wildlife Department, are critical habitat. So are vernal pools and other areas necessary to support the food, shelter or breeding needs of rare, threatened, or endangered species. Winter deer ranges are generally located in coniferous stands in valleys offering food and relief from icy winds and deep snows. These areas are often desirable sites for development. Calais contains many deer yards, the largest of which runs parallel to Route 14 for nearly its entire length in Town. There is also important black bear habitat in Calais that has been mapped by the Vermont Fish and Wildlife Department. A small area in the northeast corner of town and a larger area in the northwest corner of town have been identified as black bear reproduction habitat.<sup>24</sup> Other areas in the northeast and northwest corners of town have been designated as seasonal habitat for bears.

The Vermont Fish and Wildlife Department has also mapped core, or contiguous, forest areas in Calais. Core forests are forested lands at least 100 meters away from significant development. These areas provide crucial habitat for certain sensitive species of wildlife, including bobcat, black bear, and many songbirds, that would be adversely impacted by predation or competition from species common to developed areas and areas bordering development, such as raccoon, skunk, squirrel, and cowbird.

Calais also provides important travel corridors for wildlife. Because much of the area to the south of Calais is more heavily developed, the habitat and travel corridors in Calais take on even greater significance. By focusing growth in our villages rather than in the more rural parts of town, Calais can protect this highly significant wildlife habitat.

---

<sup>24</sup> This information is available online at:  
[http://www.centralvtplanning.com/3\\_Natural\\_Resources\\_1.pdf](http://www.centralvtplanning.com/3_Natural_Resources_1.pdf).

**Natural Areas:** A natural area is an area of land or water that retains or has reestablished its natural character and retains unusual or significant flora, fauna, geological features, or similar features of scientific interest. Such places – often remote, quiet, and beautiful – are of immeasurable value to local residents and visitors.

There are currently six natural areas identified by the state Agency of Natural Resources within Calais that are known to contain rare, remnant, or unique species of flora and/or fauna. These areas are:

Chickering Bog	Little Mud Pond
Curtis Pond	Watson Pond
East Hill Wetlands	Bliss Pond Cedar Swamp

**Public Lands:** The Town of Calais owns three forest lots comprised of approximately 154 acres. The Conservation Commission completed forest management plans and inventory reports in 1985 on the Bliss Pond and Chapin lots, completing, in part, the recommendations for the Town's forests set forth in the 1983 Town Plan. The Conservation Commission updated the forest management plans in 2003.

The Bliss Pond lot is the largest of the three lots covering approximately 120 acres and is bounded by the County Road, Bliss Pond Road, West Church and Kent Hill Roads. In 2001 a 1.5-acre parcel was acquired by the Town of Calais to provide public access to approximately seven hundred feet of Bliss Pond shoreline and protect the natural values of this shoreline. This lot is primarily northern hardwood and hemlock-hardwood forest. Parts of the lot are mapped as deer yards. This parcel contains a significant northern white cedar swamp with rare plants and an important vernal pool.

The Chapin lot covers approximately 29 acres and is situated in the approximate center of a tract of land bounded by George Road, Lightening Ridge Road, Route #14, and the Pekin Brook Road. It has a wetland area of between two and three acres that the management plan recommends be maintained as a wildlife habitat. The lot includes calcareous cliffs and a rich northern hardwood forest.

The Gospel Hollow lot covers approximately 19 acres and is situated along the east side of Pekin Brook Road at the intersection of Kent Hill Road (Gospel Hollow). The old town garage was removed from this lot in 2002.

## **Challenges and Opportunities**

The Planning Commission believes that Calais residents agree that these natural resources should be conserved. However, there are issues on which there is disagreement. How much, if at all, should resources that are privately owned be protected through regulation? How much of each resource is appropriate for the town? How best can the town, as government or as individuals, preserve and protect the resources that are deemed worthy of protection?

This Plan does not try to answer all these questions. It has set some goals that are believed to be consensus goals at this time and to represent current policy of the town; it also sets out procedures for achieving those goals, to some extent, and for resolving some of the remaining questions related to them.

## **Goal 1 - Protect Surface Water Quality.**

### **Plan of Action -**

The Town should:

- a. redraw the Shoreland District boundaries where appropriate so that impermeable geologic or other barriers to runoff are used to identify the district's boundaries;
- b. maintain Shoreland zoning regulations that preserve and protect any such barriers, and thereby protect water quality;
- c. develop setback and vegetative buffer requirements suitable for each variety of shoreland (e.g., a flat shoreland may require a smaller setback than a very steep shoreland);
- d. propose shoreland zoning regulations to minimize soil compaction and minimize the creation of impermeable surfaces that would change the flow or direction of runoff in a manner that would have an adverse impact on water quality; and
- e. maintain a riparian buffer requirement in zoning to protect water quality and other natural resources around rivers and streams.

## **Goal 2 - Protect Groundwater Quality and Quantity.**

**Plan of Action:** (see Utilities Section, Goal 2 and Regulatory Guidance.)

## **Goal 3 - Maintain and Improve Flood Protection.**

### **Plan of Action:**

- a. The Planning Commission should continue to update the Land Use and Development Regulations as needed to maintain eligibility for the National Flood Insurance Program.
- b. The Planning Commission should contact the Agency of Natural Resources to learn more about mapping fluvial erosion hazard areas in Calais. Once those areas are mapped, the Town should consider appropriate regulation in coordination with the Flood Hazard Overlay District.

## **Goal 4 - Explore Feasibility of Local Gravel Extraction.**

### **Plan of Action -**

The Town should explore options for providing and maintaining a supply of gravel for use on Town roads, consistent with the provisions of this plan.

### **Regulatory Guidance**

Subdivisions and developments under Act 250, and major subdivisions and conditional uses under town ordinances, shall:

- a. use techniques such as clustered housing to protect natural resources, farmland, and open land if reasonably feasible;
- b. have no undue adverse impact upon wetlands, important natural areas, or primary agricultural soils;
- c. be designed and landscaped to minimize significant impacts on scenic areas and identified historic resources;
- d. be designed and maintained to minimize significant impacts on water resources, core forests, wildlife corridors, and critical wildlife habitat; and
- e. be sited below ridgelines where possible.

## F. AGRICULTURE

### Introduction

Since the earliest days of settlement, agriculture has been a fundamental part of the life and community in Calais. In times past, Calais farms numbered in the hundreds and have been in the decline since the turn of the century.<sup>25</sup> With the increasing cost of fuel and food it is becoming more important to be able to once again produce a much greater share of our sustenance.

### Current Conditions

Today, five dairy farms and one large vegetable farm remain along with numerous other smaller farming operations. Calais residents raise and sell hay, dairy products, beef, pork, lamb, poultry, eggs, garlic, blueberries, flowers, Christmas trees, vegetables, maple syrup, and many other products. In addition, the consumer demand for organic foods is increasing the economic potential of small family farms that choose to farm sustainably and organically. The varied topographical nature of land and soils in Calais lends itself to small-diversified family farming operations. To meet our stated goal of producing 50% of our food, we must look into ways of helping encourage and strengthen our local agricultural producers as well as home gardeners. With just 2.1% of our population employed in farming or other agricultural-related industries, we need to support and encourage opportunities for cross-generational involvement in these industries to foster the next generation of farmers and agriculturalists in our community.

A variety of development and economic forces are threatening our ability to maintain farming and forestry as important and traditional uses of our land. Agricultural lands are particularly vulnerable to encroachment and conversion because they are generally level, cleared, and on good building soils. Fortunately, Calais appears to have many landowners committed to the preservation and good management of their resource lands.

The state's Use Value Appraisal Program, or Current Use, has been an important factor in enabling farms to stay in business and owners of former farms and open land to avoid development pressure due to high property taxes. There is also a tax stabilization program available at the town level. Other strategies are needed to encourage growth and stability in the town's current and future farming operations.



**Harvesting potatoes**



**Haying circa 1920**

---

<sup>25</sup> From Forever Calais: A History of Calais Vermont

The Agriculture Task Force<sup>26</sup> recommended by the 1998 Town Plan identified two such strategies: Purchase of development rights and the establishment of “buy -local” programs. A land trust has been established, called simply the conservation fund, and is administered by the Conservation Commission. The town might want to look at ways to increase funding. The conservation fund should partner with the Vermont Land Trust and seek funding from the state Housing and Conservation Trust Fund, which otherwise might not focus on Calais properties. The Conservation Commission should seek the Selectboard and Planning Commission’s endorsement and could refer to the list of significant farm properties compiled by the Agriculture Task Force in its planning. The Agricultural Task Force cataloged the town’s significant agricultural properties, both those that are currently used for farming operations and those that have potential for farming. It may be necessary to implement a town-wide *Land Evaluation and Site Assessment*<sup>27</sup> (LESA) study.

LESA is an analytic tool and not a farmland protection program, but it could be of great use to the conservation fund and others in determining and cataloging the highest priority farmlands for purchase of development rights. The LESA system is a tool used for identifying important farmland by providing a technical framework to numerically rank land parcels based on local resource evaluation and site considerations. Numerous towns across Vermont have found success in using this diagnostic tool to help guide sensible and sound land use decisions. LESA uses a numeric rating system that takes soil quality and other important agricultural factors, as well as other criteria deemed important by local town committees, into consideration.

Without taking steps to protect our most important agricultural lands, much of it could be permanently converted to residential land by 2020 as suggested in the recent build-out analysis conducted by the Central Vermont Regional Planning Commission.

## **Issues**

To grow enough food to feed half of our population as stated in our current vision will require not only good quality land but also the technical and economic know-how to do it efficiently and sustainably. The 2000 census shows that we have 660 households and 1529 residents. If we use the basic idea that each resident would need approximately 2 pounds of food per day, the private sector will need to somehow produce, process and store over half of a million pounds of food. This will require the necessary infrastructure to be able grow, process, store and distribute food on this scale. Land, labor, water, greenhouses, farm equipment, packing and storage sheds, and a distribution network are all necessary components to a healthy and vibrant local food system. As the most significant challenge to starting up new farm enterprises is cost of and access to land, willing landowners are going to be instrumental to helping making this happen. Farming, sustainable forestry, plant breeding, and other agricultural activities will help spur new forms of economic development and help keep our residents employed locally.

---

<sup>26</sup> <http://gr123.powweb.com/Calais/AgTaskforce.html>

<sup>27</sup> <http://www.nrcs.usda.gov/programs/lesa/>

## **Goal 1 - Identify and promote various food production, processing, and distribution systems and methods.**

### **Plan of Action -**

The Town should:

- a. establish an agricultural working group with the capacity to explore and promote these and other forms of support;
- b. look into the feasibility of developing a small-scale compost system that would both divert usable material from our local waste stream as well as provide a valuable product to our local farms and gardens;
- c. find new ways to link Calais Elementary and U-32 students with on-farm learning opportunities;
- d. increase agricultural land awareness through developing resource lists accessible through the town website or other applicable entity;
- e. identify and help empower local residents in developing local markets coupled with an educational campaign featuring local products and services based on the successful buy local campaign;
- f. explore, research and discover specific and integrated solutions; and
- g. conduct public outreach and educational information-sharing.

## **Goal 2 - Explore funding and assistance for agriculture through economic, technical and financial support.**

### **Plan of Action -**

The Town should:

- a. explore and define ways to for the community to encourage and support property owners to achieve the goal; and
- b. coordinate with town economic development committee regarding business, mentoring and financial support.

## **Goal 3 - Promote the use of PUD's and the purchase of development rights as a means of protecting important agricultural lands.**

### **Plan of Action -**

- a. The Town should encourage the use of conservation fund capital as matching funds for investment into important agricultural lands.
- b. The Planning Commission should recommend general solutions and changes to zoning.
- c. The Conservation Commission should explore using the LESA system as a tool for identifying important farmland.

### **Regulatory Guidance -**

Support an integrated approach to land, community and economic development.  
Support agricultural use of land, food processing and distribution.

## G. HISTORIC RESOURCES

### Introduction

An important part of the character of Calais is our heritage. That heritage influences and contributes to the physical, social and personal landscapes in which we live. While the present must not be focused solely on preserving the past, efforts should be made to retain evidence of our heritage for ourselves and for future generations.

### Current Conditions

The 1979 Vermont Historic Sites and Structures Survey for Calais officially lists 87 sites and structures as historic. Fifty-three of these historic sites and structures are found in the Kents Corner Historic District in Calais. In 2006, the list of structures and historic sites in the Kents Corner area noted in the National Register of Historic Places was expanded to include all sites and structures within the Kents Corner-Old West Church Historic District Design Control District. The Kent Museum, in particular, has great historical and cultural value to the residents of Calais.<sup>28</sup>

Many other sites evidencing our past exist throughout town -- cellar holes, foundations, bridges, stone walls, quarries, dams, abandoned roads, remnants of orchards or gardens, old trees, our six town cemeteries, and much more. The vast majority of this evidence of our past has not been inventoried, described, or evaluated.

The present zoning ordinance specifies a Design Control District. The District was created at the 1976 Town Meeting and establishes design standards and design review procedures for structures, modifications of structures, and certain other work within the District. These standards and procedures are detailed in the Kents Corner Historic District Design Review Guide (revised 2008).

In addition to the Kents Corner-Old West Church Historic District, the Vermont Historic Sites and Structures Survey for Calais also recommended historic districts at Maple Corner, North

Kent Tavern



Old West Church



<sup>28</sup> The Kent Museum is owned by the State of Vermont

Calais, and East Calais. The Calais Historic Preservation Commission is working on the formal nomination of several of these districts to the National Register of Historic Places to encourage their preservation and local awareness of and pride in their historic character.

## **Issues**

Should the town designate additional Design Control Districts or enlarge or modify the present one? How can we best inventory our remaining physical historic roots before they are lost permanently to earthmovers, demolition, or simply the ravages of time? How can we increase public awareness of our historic heritage and best encourage its voluntary preservation?

### **Goal 1 - Prevent undue impact on important historic sites and their surroundings.**

#### **Plan of Action -**

The Historic Preservation Commission should hold a hearing on whether to expand/modify the town's current historic district or designate additional districts. The Commission should publish its findings and make its recommendation within five years from the approval of this Town Plan.

### **Goal 2 - Inventory and evaluate the other historic sites, determine which are important to preserve, and find ways to encourage their preservation.**

#### **Plan of Action -**

The Historic Preservation Commission should begin an inventory and evaluation of the remaining historic sites in town, develop a plan to encourage their voluntary preservation and present it to the community for discussion. The Commission should publish its findings and make its recommendation within five years from the approval of this 2008 Town Plan.

### **Goal 3 - Establish a working relationship with local schools as part of an ongoing program to foster the interest of young people in the history of the cultural landscape.**

#### **Plan of Action -**

The Calais Historic Preservation Commission should reach out to local schools for voluntary assistance in the collection of historic data for areas being surveyed for NRHP nominations. Schools should also be considered venues for the presentation of current preservation and historical research work by the Commission.

### **Goal 4 - Ensure that the Kent Museum remains a historical resource for the residents of Calais**

#### **Plan of Action -**

Should the State of Vermont decide to divest itself of the Kent Museum, the right of first refusal should be offered to the Town of Calais.

## **Regulatory Guidance**

The design control requirements of the Town of Calais Land Use and Zoning Ordinance are incorporated into this plan and no development should occur in the Design control District that is inconsistent with those requirements.

## **H. EDUCATION FACILITIES**

### **Introduction**

Our educational facilities are a big part of life in Calais. In Calais educational facilities are governed by an elected Board of School Directors for Calais and one elected representative to the U-32 Board of School Directors. Calais Elementary School has a long tradition of welcoming the community into the school and including community members in classrooms. The School was one of the first in the state to utilize a wood chip burner for heating and is currently undergoing extensive evaluation for energy efficiency.

### **Calais Elementary School**

The Vision for Calais Elementary School:

Students, staff, families, and the community will work together to make Calais Elementary School an outstanding school, known for students' academic, creative, physical, and social achievement.

*The Calais Elementary School will work to:*

- honor learning differences, diversity, and the ability of each student to experience improvement and excellence;
- foster a culture of continuous improvement for all students and staff;
- support sustainable and balanced practices in staffing, budgeting, and educational programs; and
- create an environment that attracts and welcomes students, families, community, and staff.

### **Calais Elementary School Report (2008).**

Calais Elementary School is a high-performing school, as determined through a variety of measures. While there is always room for improvement, performance on standardized test scores indicates that students within the school are learning critical concepts. Climate surveys reveal strong parent, student, and staff satisfaction with the school. Families cite the school as a reason for moving to the community.

The staff and Board of School Directors are committed to maintaining and improving upon these measures of success. In addition to the school vision, a school-based strategic plan, built every five years, guides the direction of the school. An annual action plan is developed each year addressing needs identified through staff and community input. We strive for the continuous

improvement outlined within our vision statement and work to include processes for guaranteeing such improvement into our day-to-day business.

Over the past 20 years, declines in enrollment at Calais Elementary School have mirrored declines statewide. Projections for the next 5 years, however, suggest modest growth; in fact, enrollment from 2006 to 2008 is up 26%. Factors affecting enrollment include the addition of a preschool in 2001-02, and the return of some students formerly enrolled in private schools. Home-schooled and tuitioned students are welcome participants in art, music, sports, and other programs.

New programs include an expansion of the preschool to 5 days a week, and the addition of a health and wellness curriculum. A parent-run nutrition curriculum is in its third year. An increased emphasis on technology instruction has been embedded into the existing curricula.

Strategic planning efforts for Calais and the Washington Central Supervisory Union will lead to further expansion of preschool, increased collaboration across the supervisory union to support programs and efficiencies, support for community-based and innovative programs and increased technological competence among students.

The school reports annually in the Town Report enrollment, assessment results, progress in meeting its goals, and capital improvement plans, among other information.

## **The School as Community Center**

The school is currently an important community center. Over 90% of parents volunteer at the school (often for Fitness Fridays in the winter months). Community members use the school computers and library. After school programs support students doing homework after school and, for preschoolers, provide care until school lets out. Many groups and organizations within the community use the building for meetings. The Selectboard, the Planning Commission, School Board, some political parties, community sports, and parenting groups use the building regularly. Others are welcome to use the school's facility.

The school is also a designated center in case of emergencies. The town purchased a generator that the school maintains. This allows the school to provide for townspeople in the event of weather or other disaster.

## **Facility Maintenance and Planning**

The school began to build a capital budget in 2003. In 2005, voters approved the first of what have become annual appropriations to a Capital Improvement Fund. The Fund began as a way to plan for the school's upkeep and as a way to pay for energy efficiency improvements. Extensive audits of the building revealed significant unanticipated needs, many of them dating back to the addition built in 1990, when construction defects and lack of insulation created problems only now apparent. In addition, many systems (plumbing, boilers, exterior siding, and roofing, for example) are reaching the end of their normal life spans.

The school is fortunate to draw on the expertise of many local community members, and the Calais Elementary School Board is committed to keeping the school in good repair as reflected in Strategic Goal 2 in this section. The Board's goal is to retire the current bond in 2012 as scheduled, and avoid the need to ask taxpayers to support another bond then, recognizing that the Town supported a U-32 addition and the building of the Town Offices in recent years.



Adamant School



East Calais School

### **U-32 Middle-High School**

The public middle and high school serving Calais is U-32. Enrollment at U-32 has begun to decline. The decline is gradual. Three of U-32's five feeder schools (Calais, Middlesex, and Worcester) have experienced declining enrollment, and those declines will pass through to U-32. As a result, the renovated facility at U-32 is not likely to be outgrown for many years.

### **Issues**

The Calais Elementary School strategic plan includes the following goals for 2007-2012:

#### **Goal 1 - Provide an environment that develops the child.**

##### **Plan of Action -**

The School should attract, retain, and support quality staff; practice and teach the essential character traits of the ideal student; and foster relationships with families to support the development of the child.

#### **Goal 2 - Provide an environment for the child that is healthy and secure.**

##### **Plan of Action -**

The School should ensure that the physical plant meets the needs of students.

#### **Goal 3 - Provide visibility to and partner with the community to ensure sustainability.**

##### **Plan of Action -**

The School Board should:

- a. develop school budgets that are fiscally responsive to the children and the community.

b. continue joint meetings of the School Board and Selectboard to share information and discuss issues of joint concern.

**Goal 4 - Support continuous improvement and evolution of the academic and social curricula.**

**Regulatory Guidance -**

All infrastructure repairs and changes shall meet federal, state, and town codes and requirements.

All repairs, maintenance, and changes shall seek to achieve the highest energy efficiency.

**I. MUNICIPAL SERVICES & FACILITIES**

**Introduction**

**Calais Town Office**



Municipal services and facilities discussed in this Section are those related to the Town Office, the Town Hall, cemeteries, police, and zoning administration. Other services and facilities provided by the Town are covered elsewhere in this plan: Education and Transportation have their own sections of this plan; water and sewer services are in the Public Utilities section; recreational services and facilities such as the

town forests, the Curtis Pond swim area and swim program, and the schools' recreational facilities are in the Natural Resources and Recreational Resources sections; fire, ambulance, and solid waste services, and various social and public services which are provided or supported by the town are in the Regional Issues Section.

**Current Conditions**

The Town Office is located at the corner of Pekin Brook Road and Kent Hill Road in Gospel Hollow. (Mailing address: 3120 Pekin Brook Road, East Calais, VT 05650). This office is open Mondays, Tuesdays, and Thursdays 8:00 AM - 5:00 PM and Saturdays 8:00 AM – Noon. It provides office space, town record keeping, and a small meeting space. It is accessible for disabled citizens. This new building houses the Town Clerk’s office and is used for some Town committee meetings. See the Town Website for the most current information:

[www.calaisvermont.gov](http://www.calaisvermont.gov) or call 456-8720.

## Calais Town Hall

The Town Hall is located in Gospel Hollow just a couple of hundred yards up Kent Hill Road from the Town Office and is pictured on the cover of this Town Plan. The building is used for Calais town meetings, voting, and other town related meetings. The building is in need of some care at this writing.



The Town Garage is located north of East Calais village, close to Route 14. Located near a once productive gravel pit, the existing town garage is adequate for the town's current needs but it is not centrally located within the town. Eventually, a new Town Garage will be necessary and at that point, the Town should consider a location closer to the center of the town<sup>29</sup>. The Town has a full-time Road Commissioner, appointed by the Selectboard, and a full-time Road Crew hired by the Road Commissioner.

There are six Town cemeteries (Ainsworth, Fairview, Janes, Old West Church, Robinson, and Shortt) as well as a new cemetery property that is, as of this writing, in the process of being acquired. The Cemetery Commissioners manage the cemeteries, and are constantly seeking land donations to add additional cemetery space for the Town.

Currently, Calais has a three tiered approach to police protection: 1) the town constable, 2) the town annually contracts with the Washington County Sheriffs Department which provides a part-time deputy for traffic enforcement and patrol of designated areas, and 3) full-time law enforcement is available through the State Police. This system seems to provide adequate response to serious crime with minimal police presence.

The Town has a full time Town Clerk, and a part-time Zoning Administrator. The Town Clerk is elected and the zoning administrator is recommended by the Planning Commission and hired by the Selectboard. The Town Clerk, as needed, may hire an assistant (see 24 V.S.A. § 1170).

Information Services: The Town Website ([www.calaisvermont.gov](http://www.calaisvermont.gov)) is managed by a designee of the Selectboard and has information on the various Calais governmental boards, their agendas, and a calendar of meeting schedules. The Town Website is also home to important Town documents such as the Town Plan and Land Use Regulations (Zoning). At this time, the Town does not have an official webspace for ways that Calais residents can share resources such as a ride-board or a resource and talent listing. The changing economy makes sharing resources locally more important; managing and making available this type of information is one way we can do this.

---

<sup>29</sup> from an interview with Donald Singleton, Calais Town Road Commissioner, 6/27/08

The Town continues to be fortunate in the quality of services that its able employees, as well as an active group of Town Commissions, bring to the town.

## **Issues**

- a. The Town's residents should have access to information about local sharing resources
- b. The Town Garage is not centrally located
- c. The Town will continue to need more Cemetery capacity
- d. The town should repair and upgrade the Town Hall in Gospel Hollow

**Goal - Ensure that Municipal Facilities are adequate for the period of the plan.**

## **Plan of Action -**

- a. The Planning Commission should investigate opportunities to increase available information about resources that can be shared among Calais residents.
- b. The Selectboard should investigate opportunities to acquire land for a centralized town garage or gravel/sand storage area.
- c. The Cemetery Commission should investigate opportunities to acquire additional cemetery capacity.

# **J. HOUSING**

## **Introduction**

Housing is a complex and dynamic challenge involving many different factors. We recognize that a diverse range of housing alternatives is essential if Calais is to become a more viable, sustainable community able to meet the new global and environmental challenges as well as our "fair share" of regional housing needs. We recognize that an increasing number of potential new residents, based on current average regional incomes, cannot afford to either purchase or rent in Calais and an increasing number of current residents are experiencing financial challenges affecting their ability to remain in their homes. We recognize that collectively it is imperative that we explore and identify innovative and creative solutions.

The results of a survey on housing in Calais conducted at town meeting in 1989 remains accurate today:

- Those who live in Calais today hope that the ability to continue living here will not be taken away by forces beyond their control.
- Calais families hope that their children will be able to live here if they choose.
- Senior citizens hope that taxes and living costs will not force them to leave the town if they wish to stay.
- Calais residents hope people wanting to move to Calais will be able to find a home in Calais, regardless of their circumstances.
- A large number residents plan to be living in Calais in 10 years (2008 survey).

## **Current Conditions**

### **1. Twelve hundred and fifty two (1,252) additional housing units may be built in Calais (under current land use policy).**

The housing mix in Calais is primarily single-family, owner occupied units with but a few multi-family rental units and a small number of seasonal units. As of 2008, there were 840 housing units (739 year-round and 101 seasonal) in Calais (62% in rural residential district, 14% in village districts and 24% in resource recreation districts), with the vast majority being single-family. Under our current land use policy there is a maximum build-out potential of approximately 1,252 additional housing units.

### **2. Low to moderate income households increasingly cannot afford to live in Calais.**

Income levels have tended to rise slowly if at all for most Calais residents between 2000 and 2006 while home prices have increased 89%, well above county and state averages. The gap between income and housing affordability continues to widen and most likely will continue for the foreseeable future. Affordable housing for low to moderate income households is essential for economic sustainability as a town and region.

The federal government defines housing as affordable when a household with an income at or below the county median pays no more than 30% of its gross income on housing costs. A household in 2006 would need an annual income of over \$77,000 plus approximately \$14,000 in cash to afford the \$228,717 average cost of a house in Calais. In 2006 the average annual wage was \$37,430. Based on the 2000 census the median family income in Calais was 49,107.

### **3. Availability of modest and affordable rental units in Calais is a major challenge.**

Monthly rental rates range from \$800 for a modest apartment up to \$1,400 for a modest home. In order to afford \$800 rent, a household would need an annual income of \$33,342 or earn an hourly wage of \$16.07. The current livable wage is \$14.56. Many of the jobs Calais will need to attract to attain sustainability pay less than a livable wage to include agriculture, retail salesperson, child care teacher, home health aide, teacher assistant and similar type jobs.

### **4. Lack of public water and waste systems.**

Existing East Calais households have access to a public water system, but the system cannot handle additional households. There are no other community water or waste systems in town.

### **5. Lack of housing options for senior citizens.**

Our aging population will present unique housing challenges. Calais has minimal housing options designed to meet the needs of our senior citizens.

### **6. Decreasing average occupants per household and increasing number of housing units.**

Over the past 38 years 375 year-round housing units, about half of the town's existing housing, were built. However, the average household has decreased from 3.52 people in 1970 to 2.46 people in 2005. This number is expected to continue to decline in the coming years.

### **7. Estimated housing growth (306 new units) by 2020 will have a dramatic impact on the rural nature of Calais under current zoning.**

The Regional Housing Distribution Plan developed by the Central Vermont Regional Planning Commission and required under State statute Chapter 117 projects that between 2006 and 2020 Calais will need to add 306 additional housing units as its fair share of projected regional growth. This represents a 163% increase in additional housing units as compared to the 192 year-round

housing units built between 1986 to 2006. Even if half of these projected units were built it would have a dramatic impact on the rural nature of Calais under current zoning.

## **Issues**

In light of the trends cited above, Calais is, on the one hand, in the precarious position of sacrificing its much loved and sought after rural landscape to the demand for new housing. On the other hand, Calais is faced with retaining its rural nature by refusing to house a growing number of moderate income Vermonters who long for what we residents currently experience. How, we wonder, can Calais accommodate the increased housing demand of an influx of Vermonters of modest means while retaining what we all so value of the rural life and landscape? Reviewing the current trends we conclude that the rural nature of Calais will soon change forever if immediate action is not taken. The town's mostly volunteer government can best influence the situation through more effective development and application of land use policies; initiating community committees; and coordinating with regional and state planning and business organizations.

### **Goal 1 - Develop a coordinated approach to guide new housing development that:**

- a. encourages development in current villages, in Planned Unit Developments (PUD's), and in a possible new village district,
- b. minimizes future development in and around core forests, existing wildlife corridors, and important agriculture land,
- c. minimizes future development along all Class 4 roads and those Class 3 roads with identified troublespots<sup>30</sup>.

### **Plan of Action -**

The Planning Commission should:

- a. convene a housing coalition committee;
- b. identify "local" experts who can lend their expertise to various aspects effecting housing;
- c. explore, research, and discover specific and integrated solutions;
- d. encourage low to moderate income housing and accessory options to include rentals;
- e. convene a series of property owner forums;
- f. conduct public outreach and educational information sharing,
- g. prepare for Calais' "fair share"<sup>31</sup> housing units by 2020 with 80% located in existing expanded Village Districts and a proposed new village district, 10% along major class 3 roads in Rural Residential District, and 10% spread through out the Town; and
- h. recommend general solutions and changes to zoning.

### **Goal 2 - Support and encourage the refurbishing of existing housing and buildings, the creation of new housing, other buildings, and innovative landscaping that encourages:**

- a. energy efficiency and renewable energy sources for heating and electricity;
- b. the latest construction techniques and environmental friendly materials; and
- c. maximum protection and conservation of open spaces for agriculture, core forests, and wildlife linkages.

---

<sup>30</sup> see Transportation section, goal 5e.

<sup>31</sup> Central Vermont Regional Plan 2008' HOUSING 6-15, page 140

### **Plan of Action -**

The Planning Commission should:

- a. convene a building committee; and
- b. coordinate with architects, developers, and contractors on zoning, design, land use, construction, and landscaping; and recommend general solutions and changes to zoning.

### **Goal 3 - Identify innovative ways to encourage more development in expanded village districts.**

#### **Plan of Action -**

The Planning Commission should:

- a. convene village committees;
- b. develop a village vision which could include expanding the village and sharing water resources and/or waste systems, such a vision should consider potential economic, housing, and recreational needs;
- c. identify efficient and cost effective water and waste disposal options for villages and housing clusters;
- d. explore and define ways for the community to encourage and support property owners to achieve the goal; and
- e. recommend general solutions and changes to zoning.

### **Goal 4 - Explore, identify and encourage the development of senior citizen housing options.**

#### **Plan of Action -**

The Planning Commission should:

- a. convene a senior housing committee;
- b. identify current and potential future needs and options;
- c. develop public information and recommend general solutions and changes to zoning;
- d. coordinate with property owners and developers; and
- e. work with adjacent communities on potential regional senior housing solutions.

#### **Regulatory Guidance -**

- a. Support an integrated approach to land, community, and economic development.
- b. Support increased moderate and low income housing to include rentals; high density housing within existing village districts, and other areas identified for growth; and housing options for senior residents and other special needs.
- c. Support high-density housing in village district while minimizing impact on core forests, wildlife corridors, and important agriculture land.



## **K. RECREATIONAL RESOURCES**

**Bass Fishing on Nelson Pond 1906**

### **Introduction**

As we experience global, environmental, and regional changes, we need to increasingly look to our own community and region to provide residents with safe, inexpensive, environmental, and user friendly recreational opportunities. These opportunities should be readily available to all residents regardless of age, income, and/or ability. We need to ensure that, where possible, these opportunities are in concert with other aspects of the Town Plan.

The Calais Recreation Association, Calais Elementary School, and Community Connections (regional) provide the majority of recreation opportunities for children. The Mountain Tamers (local chapter of the Vermont Association of Snowmobile Travelers) maintain a network of trails on private and public land throughout Calais that are used for snowmobiles, cross country skiing, and snowshoeing. There are informal groups that sponsor other adult recreation opportunities such as biking, hiking, drama, crafts, and music.

Calais owns three town forests, trails, roads, and the Curtis Pond swimming access that are used for hiking, biking, jogging, horseback riding, and swimming. The Calais Recreation Association owns a building in East Calais, a portion of which is rented to the U.S. Post Office, and the rest used for indoor recreational activities. The Calais Recreation Association owns the recreation field on Route 14 in East Calais, which has two baseball fields, a soccer field, and an outdoor, hard-top basketball court. The Calais Elementary School has a school playground with swings and climbing structures, a soccer field, and an indoor gym. The State of Vermont provides public access to area lakes and ponds in the form of boat ramps on Curtis Pond, Number 10 Pond, Nelson Pond, and Woodbury Lake. Privately owned land is used for snowmobiling, cross-country skiing, and hiking.

The Calais Recreation Association and Calais Elementary School provide a wide variety of sports activities for children from pre-K through 6<sup>th</sup> grade. These include soccer, basketball, baseball, softball, downhill and cross country skiing, snow shoeing, and swimming. The Community Connections conducts a wide variety of programs and camps for pre-K through high school children before and after school, during school vacations except Thanksgiving and Christmas, and summer.

## Issues

- a. Expanded recreation opportunities for more residents.
- b. Access to ancient roads and private lands.
- c. Coordination and information sharing.
- d. Funding.

**Goal- Provide safe, inexpensive, environment-friendly, and user-friendly recreational opportunities for all Calais residents.**

### Plan of Action -

The Selectboard should:

- a. convene meeting of groups involved with recreation activities to define the scope of recreation and how to best coordinate current and future activities, funding, and information sharing;
- b. continue evaluating existing town rights-of-way, particularly trails, ancient roads, and class 4 roads, and to consider posting them as open for recreational use; and
- c. obtain, as needed, more effective enforcement of regulations regarding the recreational use of the ponds in town.

Recreation organization(s) should:

- a. encourage private landowners to allow public access to trails that cross their property;
- b. encourage the users of publicly and privately owned recreational resources to use the resource only in a manner that is safe, cooperative, and respectful of the resource;
- c. continue the evaluation of access to an extensive interconnected trail system throughout town and to all town forests for recreational use;
- d. develop and periodically review risk management policies, procedures, and insurance for each recreational activity; and
- e. implement a public education and information sharing regarding the availability and use of recreational resources.

The Calais Elementary School Board should continue to maintain the use and availability of facilities owned by the school for public use as consistent with the school's needs.

## L. ENERGY SECTION

### Introduction

Today, the metrics of energy consumption are understood to be much more complex than in the past. The rising cost of energy is now measured in terms of environmental and global political impacts, as well as the dollar cost to the consumer. Energy quantities are viewed not just in barrels, BTUs or kilowatt hours, but in tons of emitted greenhouse gasses, parts per billion of noxious pollutants, and the transportation miles and embedded energy associated with the products we use and depend on.

The consumption of energy attends almost all modern endeavors. It is the common thread that links building construction to agriculture, car-pooling to compact fluorescent light bulbs, and

recycling to wind-farms. There exists abundant evidence that, with regard to our environment, continuing the energy consumption patterns of the recent past is unsustainable. It is essential that our community identify the practicable ways that it can manage and change energy consumption patterns in a move towards a sustainable environment.

At the center of any discussion of environmental sustainability and energy consumption is the use of fossil fuels. We have depended on motor vehicles for transportation and enjoyed the convenience of high-energy fossil fuels for heating our homes and businesses. It is urgent now that we come to an accurate understanding of how and where we use these fossil fuels, so that we can identify the best ways to rein in their use, and develop alternatives to existing energy-use patterns.

On June 1, 2008, the General Assembly of the State of Vermont enacted the “Vermont Energy Efficiency and Affordability Act.” In its findings the legislature notes that “global climate change, which is threatening our environment and perhaps ultimately our existence, has been caused in part by an energy policy that is largely dependent on the burning of fossil fuels,” and “in order to reduce greenhouse gas emissions and environmental degradation, it is essential that we reduce or eliminate our dependency on fossil fuels by significantly improving energy efficiency and shifting to nonpolluting benign forms of energy such as wind, sun, and water power.” This section of the Town Plan considers the means by which our town can address these environmental concerns.

## **Current Conditions**

For the purposes of this section, current patterns of energy consumption are discussed in terms of users. Current conditions reviews energy use and management of the waste stream first by the municipality and then by the town’s individual residents as they heat and light their homes and travel to and from work.

## **Town Operation**

The four Town-owned buildings (the Calais Elementary School, the Town Hall, the Town Office and the Town Garage) are not large consumers of fossil fuels. The largest energy-using facility among them is the Calais Elementary School, which was constructed in 1986 with the state’s first successful biomass heating system. While the primary fuel used for heating the school (approximately 80% of heating is from wood chips) is arguably environmentally benign, the building exhibits signs of excessive heat loss through its thermal envelope. It is consuming more fuel than an energy efficient structure of the same design. This issue is understood by the school, and the implementation of corrective work awaits the financial support of the town. With regard to electrical consumption at the school, the pump system for its water supply is known to have a substantial impact on electricity use. Like the thermal envelope issue, what is required is the financial commitment by the town to address the problem.

The Town Hall is used as a venue for public meetings, but it is under insulated, and has limited usefulness as a meeting space in cold weather months. The propane wall furnaces are kept off when the building is not in use. Bringing the lower meeting space up to a comfortable temperature for three or four monthly meetings of about two hours each is an impractical use of time and energy. The East Calais Recreation Center (not Town owned or operated), Town Office building, and the Calais Elementary School are used when the Hall is not a practical option. For

larger public meetings in the Hall, woodstoves are fired up to provide heat. The relatively new Town Office building is small and energy efficient.

The Town Garage is kept heated during cold weather, though, in the evenings, only to a temperature that keeps the trucks warm enough to start. Heating is by #2 fuel oil; consumption is about 1000 gallons per year.

The town owns five trucks, two graders and one excavator. They each burn diesel fuel. School busses are owned and operated by an independent contractor.

## Transportation

A nice thing about Calais is that it's out in the countryside. The not-so-nice-thing about Calais is that its out in the countryside and the great majority of jobs, products and services are commuting distance away in the cities. Commuting in and out of town represents a significant consumption of fossil fuels.

The largest use of fossil fuel by the residents of Calais is consistent with Vermont as a whole, which is for transportation. The 2000 Census data shows that 675 of us commute to work by motor vehicle. 87% of us make the commute alone. Based on the census data, Calais commuters spend, in aggregate, an average of 368 hours per work day in a car. Current cost increases for motor fuels will most likely cause more commuters to commute by carpooling.

## Residential Energy Use

Just below transportation, in terms of energy consumption is residential energy use. The average Calais family consists of two adults and two children. To heat its home, this family burns 700 gallons of fuel oil in a central furnace. The family has an electric water heater and typical appliances, lights and other electric uses. The parents both work, in Montpelier and Waterbury, and drive their two cars a total of 25,000 miles a year. The children ride the bus to school. The annual fuel consumption for this average family is set out below.

Heat	700 gallons fuel oil (IEA 2003)
Hot water	4,400 kilowatt hours (kwh) /year
(all) other electric	2,430 kwh/year
Gasoline	1,016 gallons @ 24.6mpg

The impact of updated residential efficiency standards is unclear. Most builders and homeowners are already aware of the value of a well insulated home, if not in terms of an environmental impact, then as it impacts fuel costs. For the most part, new residential construction (that built after 1980) in Calais is efficient. This represents 27% of the 616 occupied housing units in town. Of the older, presumably less energy efficient housing stock, 39% (302 housing units) were constructed prior to 1939. If the Town is to take on energy efficiency as a sustainability goal that benefits the entire community, upgrading these older dwellings must be recognized as having a

more significant overall environmental benefit than upgrading efficiency standards for new construction.

## **Waste Management & Recycling**

Recycling and waste management is handled by the Central Vermont Solid Waste Management District (CVSWMD), which operates a transfer station for waste and recyclables staffed by community volunteers.

## **Alternative Energy Production**

Calais may have the potential to generate more of its energy within the community using renewable resources such as biomass, wood, wind, solar, and water power. However, we have never done an inventory of these resources, nor thought as a community about how we might develop and use them. Among the stated goals in the Vermont Energy Efficiency and Affordability Act is that by 2025, 25% of the energy consumed in the state be produced locally.

The local energy source with the greatest potential to offset fossil fuel consumption for heating is biomass fuels in the form of firewood, wood chips and biomass pellets. The recent rise in fossil fuel energy prices and the environmental costs associated with them will make wood and other bio-mass fuels attractive energy options. The 50% decline in wood as a heating fuel that has occurred over the past 20 years is certain to reverse. The feasibility of the local commercial production of bio-mass fuel in the form of switch-grass pellets is currently being explored by an enterprising Calais resident. These bio-mass fuels are carbon neutral in the sense that they release no more CO<sub>2</sub> than they have absorbed while growing, and production and/or harvesting is local, creating local jobs.

The use of solar, wind and hydro for generating electricity has so far been limited, for the most part, to single households; no applications for large scale electrical production have come before the town.

## **Goal 1 - Making the Commitment**

Voluntary cooperation towards the goal of reducing dependence on fossil fuels is key to the success of a local energy policy. To this end, it is essential that the various data and information resources be readily available to Calais residents.

### **Plan of Action -**

- a. The Town should establish a Calais Energy Committee to recommend to the Selectboard, the Planning Commission and the public ways to reduce energy consumption by Calais residents, students, businesses, and government. The Calais Energy Committee shall examine issues such as those in the goals and plans of action in this Plan, in order to make its recommendations.
- b. Calais may consider signing on to a Climate Commitment wherein are outlined specific environmental targets that are consistent with the consensus view on energy and sustainability. Model sustainability plans are available from a number of sources. Though perhaps not binding, such a move could foster local enthusiasm and rally community support.
- c. The Town should establish baseline data on current energy use, perhaps via polling or survey at Town Meeting Day, or mailed town-wide survey, for the purpose of measuring progress towards sustainable energy use.

## **Goal 2 - Town Operation**

The Town needs to understand the ways that its holdings and assets are being managed with regard to sustainable energy use.

### **Plan of Action -**

- a. The efficiency of our town buildings and other uses of fossil fuels should be consistent with any recommendations that are made to the whole community. To this end, public awareness is essential. For example, the issue of inadequate insulation in the school building should be understood by more than just the few residents that participate in school board meetings. The Calais Town website, local news print venues, and regular mailings for information dissemination should be considered.
- b. Where practicable, given the limitations inherent in older vehicles and the realities of fuel storage issues, the town trucks should be out-fitted to run on bio-diesel blend fuels.
- c. The citizens' group involved in making recommendations for the rehabilitation of the Town Hall should consider alternatives to the existing propane wall furnaces, combined with a new insulation package, for the purpose of making an important town asset more useful.
- d. The use of alternative fuels such as biomass pellets or chips should be considered for the Town Garage. Other means for keeping the town vehicles ready for quick use, such as engine block heaters, should be considered too.
- e. The Town should continue working with CVSWMD with regard to managing the waste stream. The Town should explore waste management options not currently locally available such as recycling electronics, salvaged building materials, paints and toxins, and organic waste for compost.
- f. To the greatest degree practicable, Town Office and Elementary School material procurement policies should favor those supplies with the highest percentage of recycled content.
- g. The Town depends on gravel materials for the maintenance of its roads. Procurement of these materials was once through local sources, but currently, these materials are brought in from greater distances, resulting in not only higher dollar costs to the town for these materials, but a much higher embedded energy content in a material that might otherwise be thought to be out of the scope of an energy plan. In the interest of sustainability, the Town should do all it can to find the means to procure its road materials locally, and assess all the broader environmental aspects of procurement.

## **Goal 3 – Transportation**

Encourage Calais residents, businesses and government to reduce vehicle miles traveled.

### **Plan of Action -**

- a. The Town should assist in carpooling initiatives and promote a website as a community bulletin board for ride sharing.
- b. The Town should stimulate the use of bicycles as a transportation option by providing bike lanes on those parts of paved roads over which it has control.
- c. The Town should consider providing local "Park & Ride" day-parking areas to make carpooling more convenient and accessible to a greater number of users

## **Goal 4 - Residential Energy Use**

There are no standards in local zoning regulations regarding minimum energy efficiency for residential construction. This fact notwithstanding, most new residential construction in town is efficient. There is still a large stock of old, under insulated dwellings in town. To the greatest degree practicable, the town should encourage energy efficiency in residential dwellings, particularly those that use energy in excess of average.

### **Plan of Action -**

- a. The Town should be a clearing house for information for a variety of weatherization programs available (the Vt. State Low-income Weatherization Program, private lender options, etc.), by providing information about such programs at the Town Office and on its website.
- b. The Town should be a clearing house for information for a variety of electrical efficiency programs available (WEC, Efficiency Vermont, etc.), by providing information about such programs at the Town Office and on its website.
- c. The Town should be a clearing house for information for the state-mandated energy efficiency standards. Copies of Residential Building Energy Standards (RBES)<sup>32</sup> Guidelines should be available at the town office and a copy of the International Energy Conservation Code (IECC) should be available for use by town residents.
- d. The Town may consider requiring copies of completed RBES Guideline forms be submitted prior to issuing a zoning permit for new construction. Though there is probably no realistic way to for the Town to enforce non-compliance, this requirement would put some emphasis on the Guidelines' relevance.

## **Goal 5 - Waste Management and Recycling**

Encourage waste reduction, reuse and recycling.

### **Plan of Action -**

- a. The Town should continue to foster its good working relationship with CVSWMD in meeting these goals.
- b. The Town should participate in developing a "Zero Waste" target, as currently being considered by the CVSWMD. A more complete range of recycling opportunities could be put in place at the Moscow Woods Road waste transfer station, including but not limited to salvaged building materials, electronics, and paint and other environmental toxins.
- c. Calais Elementary School should adopt a "Zero-Waste" policy as part of an ongoing student project, as means of increasing local awareness of the complexities of a well-managed waste-stream.

---

<sup>32</sup>RBES. See <http://www.leg.state.vt.us/statutes/fullsection.cfm?Title=21&Chapter=003&Section=00266>

## **Goal 6 - Alternative Energy**

Calais should support its residents seeking to use environmentally benign alternative energy sources.

### **Plan of Action -**

- a. The Town should conduct a survey of existing fossil fuel energy alternatives (biomass and firewood harvesters/distributors and small scale solar, hydro, and wind electrical generation) to establish a data baseline from which to gauge future alternative energy development and direct town policy in this regard.
- b. The Town should encourage the use of fossil fuel alternatives by providing a list of alternative fuel providers at the Town Office and on its website. Special note could be made of biofuel providers who engage sustainable harvesting practices.
- c. The Town should review Calais zoning regulations for the purpose of ensuring that they do not impose any unnecessary or inappropriate impediments to the development of small-scale alternative energy systems.
- d. The Town should, to the degree possible, consider financial incentives such as local property tax credits or rebates for installing or otherwise deploying and/or developing alternative energy.
- e. Biomass fuel sources, especially firewood, should be harvested in a manner that is itself sustainable. Current resources for biomass material providers include The Forest Stewardship Council and other sustainable forest management organizations, which can provide sustainable harvesting information. Information regarding sustainable forest management should be made available in the Town office or the Town Website.

## **M. ECONOMIC DEVELOPMENT**

### **Current Conditions**

A healthy and diversified economy is critical to maintaining quality of life in Calais. A healthy economy provides employment, stimulates social and cultural interaction, and provides resources for other community services.

In 1990 only 18% of Calais' employed residents worked in town. This number increased in 2000 to 21%. The 2007 Central VT Economic Profile identifies 30 employers in Calais who employ a total of 104 persons. The average annual wage earned by Calais residents is \$37,430 and there are 840 residents in the labor force. A 2008 survey of Calais residents indicated 47% of respondents felt the town should be planning for businesses with employment opportunities in Calais.



The Calais economy consists of numerous small businesses that include retail, various forest and agricultural enterprises, food producers, cultural services, repair services, and manufacturing. Many residents also work from their homes as artisans, writers, insurance agents, consultants and in the more traditional trades such as carpentry, landscaping, plumbing, and electrical. While it is apparent that more than a few jobs are provided in Calais, most residents still find employment outside of the community.

Large-scale commercial or industrial development is most likely and appropriate to occur in other parts of the Central Vermont region that have the necessary infrastructure (power, water, wastewater, transportation) to support it. Approximately 70% of the Central Vermont region's employment is concentrated in the urban core of Montpelier, Berlin, Barre City, and Barre Town. Together the region's urban core accounts for about 90% of the region's employment and approximately 70% of its population. As more than three-fourths of Calais residents leave town for employment, it is important that Calais support these employment centers as locations for larger businesses.



**Maple Corner Cooperative**

## **Challenges and Opportunities**

If Calais is to “provide meaningful local employment to at least 40% of our working population” as stated in the opening vision statement, we must be pro-active in our support of new and existing small businesses, including home-based professionals/businesses and agricultural producers. Telecommuting can provide another means to work in Calais, and with rising energy and transportation costs, telecommuting is expected to increase.

Access to high speed telecommunications will be critical for all businesses and telecommuters to survive and thrive in Calais. Community and regional support through buy local initiatives, financing opportunities, supportive zoning, access to affordable housing, transportation systems, and childcare will also be needed.

**Goal 1 - Provide meaningful local employment to 40% of Calais residents.**

**Plan of Action-**

The Selectboard should consider establishing a business support committee that would work to achieve this goal. Some possible activities the committee could undertake include:

- a. expand the official Calais Town website to include links to businesses and services available in the community;
- b. encourage the creation and expansion of Calais businesses that utilize natural resources and raw materials, with particular emphasis on value-added processing of agricultural and wood products;
- c. identify and help organize former and existing successful Calais entrepreneurs willing to provide guidance and technical advice to new and beginning businesses;
- d. Identify and facilitate networking and cooperative initiatives between Calais businesses.
- e. identify ways to strengthen village centers as units of economic activity; and
- f. focus on food production and other agricultural pursuits.

**Goal 2 - Ensure that zoning regulations do not impose any unnecessary or inappropriate impediments to reasonable small business development, agricultural enterprises, or home based businesses.**

**Plan of Action -**

The Calais Planning Commission should:

- a. review and recommend appropriate changes in the conditional uses allowed in the rural residential and village districts of the zoning regulations;
- b. consider expansion of village districts and establishing an additional village district near the elementary school and adjacent to North Montpelier village; and
- c. consider zoning and other changes to encourage rental and multi-family housing.

**Goal 3 - Continue support of regional business development organizations and initiatives.**

**Plan of Action -**

The Town should:

- a. continue to provide financial support to regional economic development organizations through allocations decided upon at town meeting, e.g., responses to requests from such organizations as Central Vermont Economic Development Corporation and Central Vermont Action Agency;
- b. encourage Calais residents to represent the town in regional economic and community development initiatives and organizations;
- c. support the Central Vermont Workforce Investment Board (WIB); and
- d. support with adjacent towns the development of a regional systems approach to quality, affordable, and reliable early childhood care and education centers and home careproviders.
- e. encourage Calais residents to represent the town in initiatives that serve the region.

## **Goal 4 - Support development and provision of infrastructure to support Calais businesses.**

### **Plan of Action -**

The Town should:

- a. support and facilitate availability of high speed internet service to all areas of Calais;
- b. investigate decentralized wastewater systems or on-site system management to allow additional development, residential and business, within village districts; and
- c. work cooperatively with neighboring communities when a multi-community solution is needed.

## **N. REGIONAL ISSUES**

### **Introduction**

Although Calais is, by necessity, moving toward ever greater self sufficiency, it continues to rely on neighboring communities and regionally based organizations for many of the essential services its residents receive. These services run the gamut from emergency assistance (fire and ambulance) to library privileges.

### **Current Conditions**

Many social services are provided to Calais residents by regionally based not-for-profit organizations. Annually, the town appropriates amounts for support of these organizations. Descriptions and amounts are published in the Town Report.

At present, Calais contracts for ambulance services.

Both the East Montpelier Volunteer Fire Department and the Woodbury Volunteer Fire Department provide fire protection to Calais. The East Montpelier Volunteer Fire Department provides emergency medical services. The Town supports both departments through annual appropriations for both operating and capital expenditures.

The Washington Central Supervisory Union serves Calais, Berlin, East Montpelier, Middlesex and Worcester by providing administrative support to the elementary school and special education services.

Calais also provides monetary support to and maintains active membership in two regional municipal organizations, the Central Vermont Solid Waste Management District (CVSWMD) and the Central Vermont Regional Planning Commission (CVRPC).

CVSWMD was formed in 1985 to protect the interests and meet the waste management responsibilities of its member communities. Each member community has one voting representative to the District, with voting weighted by population. Each community, including Calais, provides an annual appropriation to the District although the majority of the District's budget is funded via surcharges on waste disposal fees at landfills.

CVRPC serves 23 towns in Washington and western Orange counties. CVRPC provides a forum in which towns can work together to address regional issues and opportunities. Regional Planning Commissions serve as the coordinating agency for transportation planning and

ultimately for the disbursement of state and federal funds for transportation projects. CVRPC also provides planning and technical assistance to its member towns.

**Goal 1 - To communicate, cooperate and coordinate with neighboring communities on issues of mutual interest.**

**Plan of Action -**

The Selectboard and Planning Commission should meet annually with their counterparts in neighboring communities (examples of collaboration might include regional agreements on how to manage core forests as they cross town borders, regional agreements on strategies to prevent large scale commercial water extraction from water tables crossing town borders, and regional collaboration on keeping inter-town travel corridors open and accessible to wildlife).

**Goal 2 - To continue membership in the Central Vermont Regional Planning Commission (CVRPC), the Central Vermont Solid Waste Management District (CVSWMD), and the Central Vermont Economic Development Commission (CVEDC) and to maximize the benefit of Calais' membership in these regional organizations.**

**Plan of Action -**

The Selectboard should insure that Calais maintains active representation and participation in the above named organizations.

**Goal 3 - To underwrite regional providers of those support services that are not provided by the Town or organizations within the Town.**

**Plan of Action -**

The Town should annually consider the list of 25-30 regional organizations that seek funding from Calais and support those that most closely meet the needs of Calais residents.

**Goal 4 - To consider expanded services through new or existing regional organizations or affiliations where appropriate and cost effective (example: creation of a Calais commuter shuttle, new CSA's, or local broadband solutions).**

**Plan of Action -**

The Selectboard and the Planning Commission should support or initiate the creation of electronic forums to connect Calais residents with other Central Vermonters on topics as diverse as transportation, energy, and best farming practices.

