THE VERMONT FORUM ON SPRAWL has conducted a poll of over 2,300 Vermonters on the subject of community values and sprawl. The poll provided information on the relationship between public attitudes and development patterns through a series of questions on quality of life, Vermont values, community, choice of residence, shopping patterns, and sprawl.

Summary of Findings

The results of the poll show that Vermonters value community life, agricultural heritage, a quality environment and opportunity for a good education. They believe communities should consist of compact settlements with good access to preserved open land and a nearby working landscape. At the same time, they often make personal choices that work against this vision. Nevertheless, they believe we can have growth without sprawl and that there is a need to take action to address sprawl in Vermont.

Method

A national polling firm, Macro International, undertook the poll for the Vermont Forum on Sprawl. The 2,325 interviews were conducted by telephone with randomly sampled Vermonters between August 24 and October 6, 1998. The telephone numbers were obtained using the Random Digit Dial technique. This method generates telephone numbers randomly from the set of all possible valid telephone numbers, insuring that the sample accurately represents all Vermonsters with telephones. An approximately equal number of interviews were conducted in each of six regions of Vermont. (see map on page 2) The sample size was designed so that percentages reported within each region are accurate to within ±5% with 95% confidence. Results based on data for the state as a whole are accurate to within ±1.36% at 95% confidence. The overall response rate was 76% which provides a high degree of confidence in the representativeness of this sample.

Key Findings on Sprawl

1. A clear majority of respondents (61%) felt there is a need to take action to stop sprawl. Only 26% felt that no action should be taken.
2. Sprawl is not inevitable according to the respondents. Of those who thought current land use patterns would lead to sprawl, 81% believed it is possible to stop sprawl.
3. Overall, 72% of respondents said that sprawl and growth were not the same.
4. Of those who thought sprawl and growth were different, 90% said it is possible to have growth without sprawl.
For all research the Vermont Forum on Sprawl is conducting, municipalities have been classified in four categories: traditional centers, new growth towns, outlying towns and resort towns.\(^3\) (See map at left.) The poll results were analyzed by the six regions of Vermont, town types, age, gender, income, and years lived in Vermont.

**Vermont Values**

No matter where they live, Vermonters value the quality of the environment, low crime rates, residents helping each other, the working landscape and a quality education. These results are consistent with findings of the Governor’s Commission on Vermont’s Future, who reported in 1988 that a set of four values were commonly held by Vermonters: community life, agricultural heritage, environmental quality and opportunity for a better life, including education, jobs, and affordable housing.\(^4\)

The following tables illustrate what the poll revealed about Vermonters’ top four values by type of community and by region.

### Table 1

**Top Four Values by Community Types**

<table>
<thead>
<tr>
<th>Rank</th>
<th>Overall</th>
<th>Traditional Center</th>
<th>New Growth Town</th>
<th>Outlying Town</th>
<th>Resort Town</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Quality environment</td>
<td>Quality environment</td>
<td>Low crime rate</td>
<td>Quality environment</td>
<td>Quality environment</td>
</tr>
<tr>
<td>2</td>
<td>Low crime rate</td>
<td>Low crime rate</td>
<td>Quality environment</td>
<td>Low crime/residents helping</td>
<td>Low crime rate</td>
</tr>
<tr>
<td>3</td>
<td>Residents helping each other</td>
<td>Residents helping each other</td>
<td>Quality education</td>
<td>Working landscape</td>
<td>Working landscape</td>
</tr>
<tr>
<td>4</td>
<td>Working landscape</td>
<td>Quality education</td>
<td>Residents helping/working landscape</td>
<td>Slower pace of living</td>
<td>Residents helping each other</td>
</tr>
</tbody>
</table>

### Table 2

**Top Four Values by Region**

<table>
<thead>
<tr>
<th>Rank</th>
<th>Champlain</th>
<th>Chittenden</th>
<th>Taconic</th>
<th>Cl. River</th>
<th>N. Central</th>
<th>NE Kingdom</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Quality environ./resid. helping</td>
<td>Quality environment</td>
<td>Quality environment</td>
<td>Quality environment</td>
<td>Quality environment</td>
<td>Quality environment</td>
</tr>
<tr>
<td>2</td>
<td>Wkg. landscape</td>
<td>Low crime</td>
<td>Low crime</td>
<td>Low crime</td>
<td>Low crime</td>
<td>Low crime</td>
</tr>
<tr>
<td>3</td>
<td>Low crime</td>
<td>Quality education</td>
<td>Residents helping</td>
<td>Residents helping</td>
<td>Wkg. landscape/residents helping</td>
<td>Residents helping</td>
</tr>
<tr>
<td>4</td>
<td>Quality education</td>
<td>Working landscape</td>
<td>Wkg. landscape/resid. helping</td>
<td>Working landscape</td>
<td>Locally-owned businesses</td>
<td>Working landscape</td>
</tr>
</tbody>
</table>

### Community Character

When asked what features may or may not be desirable in a community and where certain features should be located, a broad picture emerges of a community that Vermonters value. This image resembles a village with public gathering places, shops and services, and some housing located in the center or within walking distance of each other. There is access to sidewalks, bikepaths, and public transportation. Public green spaces and parks are also within the center or near residential neighborhoods. Preserved open land is a very important feature in this community. While some places of employment would be located in the town center, most employment would be outside the center or elsewhere in the region.

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\(^1\) 96.7\% of Vermonters have telephones. *Vermont Department of Public Service, 1988*.
\(^2\) This means that one can be 95\% sure in any sample of the population that the result will be within 5\% of the actual, given value.
\(^3\) Traditional centers are the urban centers of the state and villages for which Census data on population is available. New growth towns are primarily towns that surround urban centers and that have absorbed most of their county’s growth. Resort towns are towns that host a major ski area or that have a very high ratio of seasonal homes to year-round homes. Outlying towns are the remaining towns in the state.
\(^4\) Governor’s Commission on Vermont’s Future: Guidelines for Growth, January 1988.
With the exception of the location of employment, the poll results reinforce the statewide vision of compact village and urban centers separated by rural countryside. When such a place was described to respondents, 48% said that they would have some interest in living in this community vs. 31% who would be less interested. Others were neutral to the idea.

The overall ranking of features that are "desirable" or "extremely desirable" is:

- preserved open lands ................................................................. 94%
- access to sidewalks and bikepaths ............................................... 85%
- mix of housing, stores and services within walking distance ........... 84%
- access to public transportation .................................................... 83%
- mix of housing types ................................................................. 80%

Choice of Place to Live

Respondents were asked whether or not they considered particular characteristics when choosing a place to live. Not surprisingly, the cost of a residence was considered most often. Natural beauty, privacy, safety and appearance of the neighborhood were other high-ranking responses. These findings are in keeping with the high value given by Vermonters to the environment and low crime. When choosing where to live, accessibility to shopping, schools, recreation areas, and public transportation and the ability to walk to places in the neighborhood ranked in the middle to lower third of the items. However, Vermonters felt that such accessibility was important when they responded to general questions about community life. This discrepancy indicates that Vermonters don’t always act consistently with values that are important to them.

These results also indicate the importance of providing for natural beauty, privacy, safety and a good appearance in all neighborhoods — urban, village and rural — no matter where these neighborhoods are located in the state. Communities that are anxious to improve existing neighborhoods should consider these priorities of Vermonters.

Respondents were also given a hypothetical choice between buying a $100,000 home in an urban or village area close to public transportation, work and shopping or a larger home in an outlying area with longer commutes and more yard space. Overall, 21% of the respondents chose the home in the urban or village area and 74% chose the home in the outlying area. Those choosing the urban or village setting are more likely to be female and older and most of them currently live in a traditional center. A large portion of those choosing a rural setting live in an outlying town. Again, these results show a discrepancy between Vermonters values and the choices they make.

When the desirability of features in a community were analyzed according to town type, some interesting findings were made:

1. Respondents living in resort towns rated preserved open lands higher than the overall average (99% vs. 94%) and mix of housing types lower than the overall average (79% vs. 84%).
2. Those respondents living in traditional centers rated a mix of housing, stores, services, within walking distance significantly higher than the overall average (90% vs. 84%).
3. Eighty-six percent of respondents who live in traditional centers said that access to public transportation was a desirable feature in a community, compared with 79% in outlying towns.
4. Those respondents living in outlying towns rated a mix of housing, stores, services, within walking distance significantly lower than the overall average (79% vs. 84%), and access to public transportation lower than the overall average (79% vs. 83%).

![Desirability of Features by Town Type](Figure 2)
Shopping Patterns

Shopping behavior was explored with a series of questions about where respondents shopped and why. When asked about shopping during the past month, 84% of respondents had shopped in a downtown or town center, 71% in a mall or other shopping center, and 41% in a big box store. Just over half of Vermonters (52%) shop most frequently in a downtown or town center, with two of the main reasons being closeness to home and a local connection. Thirty percent (30%) of respondents shop most frequently at malls or shopping centers. Among the reasons given for shopping at malls is the large variety of items in one location. A much smaller percentage (9%) shop most often in a big box store. Respondents say that these stores offer lower prices and large selections.

Respondents are very supportive of downtowns and town centers as places to shop. However, it is clear that accessibility, or proximity, to these locations is a major reason for people shopping there. Malls, shopping centers and big box stores are still in fewer locations in Vermont. It is interesting that respondents did not identify lack of parking in downtowns as a major reason to shop at malls and shopping centers. Accessibility or proximity, a large variety of items in one location and offering lower prices are important to shoppers.

The percentage of respondents who shopped most frequently in a downtown or town center was fairly uniform across age, gender and income. However, there were significant differences by town type and region. Far fewer respondents in the Chittenden region chose to shop in downtowns (43%) than in any other region (49%-62%) and significantly more respondents in the Northeast Kingdom (62%)
shopped most frequently in downtowns and town centers. Significantly fewer respondents from new growth towns shop most frequently in downtowns (45%) than respondents from traditional centers (53%) or outlying towns (58%). These differences among regions and types of communities may reflect the availability of more shopping centers or malls in growth towns or growth regions.

**Characteristics and Extent of Sprawl in Vermont**

Over half of Vermonters are aware of sprawl and recognize the following characteristics of sprawl:

- Commercial development strung out along a highway ........................................... 88%
- Increased amount of paved areas — roads, parking ........................................... 72%
- Single family homes spread out on former farm fields ........................................... 72%
- Widely spaced development with a scattered appearance ........................................... 58%
- Development that requires an automobile ......................................................... 56%

Respondents who were aware of sprawl in Vermont were asked to identify the towns in which they had noticed sprawl. Over half of Vermont municipalities were mentioned. Williston was the most frequently mentioned (44%) community.

Respondents who had never heard of sprawl were given a definition of sprawl in order to answer other questions in the poll. The definition used was: *Sprawl is dispersed development outside of compact urban and village centers along highways and in rural countryside.*
Impacts of Sprawl

When asked if they had noticed any of a set of items representing change in their communities, respondents most frequently (64%) mentioned a locally owned store going out of business. Respondents were later asked if any of these same items were a potential impact of sprawl development. The most commonly perceived impacts were: new stores outside of town (73%), working landscape divided into house lots (72%), loss of places for hiking, hunting or fishing (66%), loss of a favorite view (66%), haphazard growth patterns (63%), more stores to shop at (63%), and local store going out of business (60%).

The impacts of sprawl that showed significant differences by town type were:
- Loss of a favorite hiking, hunting or fishing spot (overall, 66%) with new growth towns (63%) significantly lower than either outlying towns (69%) or resort towns (78%).
- Working landscape being divided into residential lots: (overall 72%) with resort towns (85%) significantly greater than traditional centers (70%).

Growth vs. Sprawl

Respondents were asked whether or not sprawl and growth meant the same thing. Overwhelmingly, respondents said they were different. Overall, 72% said they were different, 21% said they were the same, and the remainder didn't know or didn't answer. The level of response was consistent by town type and region except in Chittenden County where a higher percentage (82%) of the respondents said that growth and sprawl were different.

As a follow up question for those who thought growth and sprawl were different, respondents were asked whether or not it was possible for their communities to have growth and development without sprawl. Nine out of ten respondents said that it was. This response was consistent across town type and region of the state.
Sprawl as a Problem

Throughout Vermont and in each of the six regions and the four town types, over half of respondents felt that current land use and development patterns, if unchanged, would lead to sprawl. Of all the regions, Chittenden County had the highest percentage (70%) of respondents agreeing with this statement.

Respondents who thought that current patterns would lead to sprawl were then asked if this would be a problem in their daily lives or for Vermont overall. While 78% identified sprawl as a problem for the state, fewer (50%) felt it would be a problem impacting their daily lives. There was no significant difference in the perception of sprawl as a problem when analyzed by town type, gender or income. As the table below shows, the region with the highest percentage of respondents (85%) identifying sprawl as a problem for the state was the North Central region and the region with the highest percentage of respondents (57%) identifying sprawl as a problem in their daily lives was the Chittenden region. The region with the lowest percentage of respondents (70%) identifying sprawl as a problem for the state was the Northeast Kingdom and the region with the lowest percentage of respondents (44%) identifying sprawl as a problem in their daily lives was the Connecticut River Valley.

Is Sprawl Inevitable?

Sprawl is not inevitable according to the respondents of this poll. Those who thought that sprawl would happen if current land use patterns continued overwhelmingly (81%) believed that it is possible to change development patterns so that they do not lead to sprawl. This response was consistent by region and town type.

Need to Take Action on Sprawl

Overall, 61% of respondents felt there is a need to take action to stop sprawl development. Only 28% felt there was no need to take action and 11% didn’t know or didn’t answer. The percentage identifying a need to take action increased to 71% among those who were aware of sprawl. The need to stop sprawl did not vary by town type although it did vary somewhat by region. The need to take action was felt most strongly in Chittenden County (68%) where more respondents also felt that sprawl was a problem in terms of their daily lives.
The mission of the Vermont Forum on Sprawl is to assist Vermont and Vermonters in achieving compact settlement surrounded by rural landscape while encouraging community and economic development to be consistent with this vision. We will identify the patterns and attitudes that produce or contribute to sprawl and we will encourage changes to those patterns and attitudes. Our mission will be accomplished through education, research, coordination with other groups, and action programs.

The Forum is a project of the Orton Family Foundation, a private operating foundation based in Rutland, Vermont, established in 1995 to assist rural communities in promoting their heritage, economic strength, interaction of citizens and respectful use of natural resources.

To obtain more information about the Poll of Vermonters on Sprawl, contact the Vermont Forum on Sprawl, 110 Main Street, Burlington, VT 05401
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This report is also available on the Vermont Forum on Sprawl’s web site: www.vtsprawl.org

Additional reports in the Exploring Sprawl series will be available on What is Sprawl in Vermont, State Public Investments and Policies Affecting Sprawl, Causes and Effects of Sprawl in Vermont Communities, Costs of Development in Downtowns vs. Open Spaces, and Economic and Social Trends Related to Sprawl.

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CONCERN ABOUT THE PATTERN OF DEVELOPMENT THAT IS OFTEN CALLED "SPRAWL" has come to the forefront in Vermont. Over the past year, more and more Vermonters have called this issue one of the most pressing that we face. Governor Howard Dean recently cautioned: "If we dissolve into the anonymity of the great suburban rings around our cities, then we are also going to dissolve our sense of community, our sense of who we are, our sense of neighbors caring for neighbors."

Concern over this issue, of course, is not new. For the past 30 years, Vermonters have struggled to encourage growth in jobs and economic opportunity while protecting the pattern of compact settlements and open, productive land that is this state's historic and distinctive feature. Today, with development pressures continuing and 65 million people living less than six hours' drive from Vermont, a key question is still the one that former Governor Deane Davis asked in 1970: "How can we have economic growth and help our people improve their economic situation without destroying the secret of our success, our environment?"

Most Vermonters today appear to believe this question can have positive answers. A recent poll of over 2,300 Vermonters, conducted by Macro International for the Vermont Forum on Sprawl, found that 72% of those polled believe sprawl and growth are not the same. Among those who see a difference, 90% believe it is possible to have growth without sprawl.

The Vermont Forum on Sprawl is working with a broad cross-section of Vermonters to develop strategies and solutions that can respond to these hopes and concerns. First, though, it is vital to define what sprawl is to Vermont — and to examine closely what has been happening in Vermont communities. Only when we clearly understand the issue can we frame workable, practical solutions.
Defining Sprawl

The Vermont Forum on Sprawl has developed this definition:

Sprawl is low-density development outside compact urban and village centers along highways and in rural countryside.

To find out how well this definition fits, both with Vermonter's perceptions and with the realities of growth in communities, in 1998 the Forum carried out these projects:

- Gathered Vermonter's views, through the poll, on sprawl and community character.
- Studied growth in eight sample communities through interviews, examination of town records, and other means of collecting information.
- Visually assessed sprawl in these case-study communities by looking at and comparing maps, aerial photography, and ground-level photography from different stages of local growth.

Vermonters' Impressions of Sprawl

In the Forum's poll of 2,300 Vermonter's, more than 50% of those responding had heard of sprawl and agreed that it had these characteristics:

- Commercial development strung out along a highway ........................................... 88%
- Increased roads, paved areas and parking ............................................................... 72%
- Single-family homes spread out on former farm fields .......................................... 72%
- Widely spaced development with a scattered appearance ...................................... 58%
- Development that requires an automobile .............................................................. 56%

The respondents said that, in their view, over half of Vermont communities have at least some sprawl.
Asked if they had noticed any of the types of changes often attributed to sprawl, those polled mentioned:

- New stores outside of town..................................................73%
- Working landscape divided into house lots..........................72%
- Loss of places for hiking, hunting or fishing......................66%
- Haphazard growth patterns..............................................63%
- More stores at which to shop..............................................63%
- A locally owned store going out of business.....................63%

For more findings from the poll on sprawl and community values in Vermont, please see Exploring Sprawl, Issue No. 1: Vermonters’ Attitudes on Sprawl.

The Case Studies: Eight Sample Communities

To seek out the patterns and key features of sprawl in a diverse cross-section of Vermont communities, the Forum focused on seven towns and one city: Barre City, Dover, Ferrisburgh, Middlebury, Morristown, Norwich, Shaftsbury and Tinnmouth. The researchers sought to glimpse the unique characteristics of each town, and then to find the common traits related to sprawl. The eight communities were selected to represent “Traditional Centers,” “New Growth Towns,” “Outlying Towns” and “Resort Towns.”

Traditional Centers: Barre City and Middlebury

These communities have had a long history of growth and development. They show a compact development pattern, with mixed uses — residential, commercial, and public buildings — and people of mixed incomes living relatively close together. Between 1987-92, the five-year period studied by the researchers, these communities and the resort town of Dover had the highest percentage of house lots created that were under four acres in size. The trend in these Traditional Centers is toward continuing the pattern of small lots — although many of the new lots are larger than the older ones in town.

New Growth Towns: Morristown, Shaftsbury and Norwich

These towns have seen recent surges of growth, with a variety of impacts. Norwich, for example, displays a pattern of homes developed on widely spaced lots on former farmland, while Morristown has seen commercial growth cover a roadside area, with wide, paved spaces between large buildings — also on former farm fields.

In the New Growth Towns, the trend in residential development is toward larger lots, especially compared with the Traditional Centers. During the five years studied, median lot sizes within new subdivisions were 10.1 acres in Norwich, 6.6 acres in Shaftsbury, and 4.1 acres in Morristown. In Middlebury, in contrast, the median new lot size was 2.7 acres, while in Barre it was just .32 acre.

Resort Towns: Dover

The project defined resort towns as communities with a major ski area in them and/or with a high share of seasonal housing units.

In Dover, the number of vacation homes grew by 385% between 1978-97. Vacation properties are now 85% of all residential properties in town, and are primarily on parcels under six acres in size. The local trend is toward relatively dense resort developments that are separate from each other and scattered over a wide area, with few of the connections found in more traditional development patterns.

Outlying Towns: Ferrisburgh and Tinnmouth

These rural towns have seen less growth in recent years. Today, their situations vary. Tinnmouth, a forested community in a remote location, has seen little development and still has limited growth pressure — while Ferrisburgh, a farming community along Lake Champlain and the increasingly busy Rte. 7 corridor, expects to see increased pressure for new housing. The trend in both communities is toward larger house lots: Tinnmouth’s five-year median size was 18.1 acres, while Ferrisburgh’s was 10.1 acres.
Looking at Sprawl: A Visual Analysis

Examining maps, aerial and surface photographs from various stages in the growth of the case study towns made it possible to observe the emergence of sprawl over time.

**Rural Residential Sprawl**

Aerial photos of Norwich from 1963 and 1992 show a striking contrast that seems typical of Vermont’s rural residential development of recent years.

In 1963, homes sat close to the roads that connected different parts of the town and neighboring communities. No houses were sited in woods, and houses on open land were built on the edges of fields, to preserve farmland.

Thirty years later, a different pattern had emerged. New dead-end streets had been added; houses occupied prime locations on open fields; woodlands had been cleared for house lots. Although areas such as these are still low-density, they tend no longer to be part of working landscapes.

**Commercial Development**

The most-often recognized form of sprawl is commercial strip development, the linear pattern of individual commercial uses often found along rural highway stretches and outside of older commercial centers.

In Middlebury, photos from 1962 and 1996 show the change from early signs of strip development to many commercial buildings surrounded by parking areas along Route 7, especially south of the village.

In more rural areas, a strip development pattern is often slower to emerge. A gas station/convenience store may be built along a rural highway — and that begins a major change in use. Over time, a hardware store and second gas station appear; the town fire and rescue squads relocate to the edge of the village; older roadside homes become antique stores or restaurants; the road itself is widened for the increased traffic; and the roadside’s original character has been dramatically changed.

Another form of sprawl is in new commercial centers outside of traditional centers. An example is in Morristown, near the intersection of Rtes. 15 and 100 (see image on p. 2). Primarily farmland in 1963, this area is now largely covered by large new buildings, built way back from the road, widely separated and surrounded by large parking lots. The commercial growth has gobbled up space: At its densest, it features only 20% lot coverage.
Expansion of Town Centers

Sprawl can also be found in towns' expansion outside of their designated growth areas onto more rural lands. Rather than providing a mix of uses, as traditional centers do, these new growth areas are divided into industrial, commercial and/or residential zones, often distant enough from each other that to get from home to business, store, school or library, the typical resident must use a car.

Changes in the pattern of streets often point to this type of sprawl. Before World War II, most developed towns had through roads, connecting to other communities, and a network of shorter,-interconnecting streets in the town center. In the post-war period, a new pattern emerged: Subdivisions and individual houses were often located off the through roads — on long driveways, cul-de-sacs, loop roads or small networks of subdivision streets. These new streets tended to spread out around the community, rather than concentrating in or next to the town center.

Six Patterns of Sprawl Development

The community case studies and the visual analysis led the Forum to identify six patterns of sprawl in Vermont communities. However, each community is unique; and each situation must be looked at individually, with broad community discussion, before determining whether it represents sprawl.

Some of the questions to answer to determine whether a condition is sprawl include:

- How big are the lots? Could they be smaller? Are land uses separated from each other?
- Is the access designed for cars or for walking?
- Are there plans to fill in the area and add mixed uses?
- Do natural conditions (soils, slopes) dictate the layout of the area?

The six sprawl patterns are:

1. Scattered Residential Lots in Outlying Areas.

All the communities showed this development pattern, except for Barre City, which is an urban center and doesn't have an outlying area within its borders. Excluding Barre, the median sizes of recently created house lots ranged from 1.6 to 18.1 acres — considerably larger than the traditional, quarter-acre lots commonly found in villages and older neighborhoods.

In general, these house lots have been created away from village, downtown or growth center areas. Homes are often sited off main roads on long driveways, cul-de-sacs or loop roads. In resort areas, these homes are often vacation residences.

The size of these lots appears to be less significant than their spread-out pattern, which has tended to carve up productive farm and forestland, wildlife habitat, and other open spaces and natural areas.

2. Housing Developments In or Near Town Centers, With a Suburban Pattern and Comparatively Large Lots.

Dating mostly from the 1970s and 80s, these subdivisions are usually located on town roads and on municipal water and/or sewer systems. Compared with nearby, traditional village settlements, the lots in these subdivisions are larger, their streets are wider, and their homes are set farther back from the road. The towns with the most overall development, Middlebury and Barre, have several examples of these subdivisions.
3. Multi-lot, planned housing developments on new access roads in outlying areas.

In more developed communities, these residential subdivisions of nine or more small to mid-sized lots have often been sited away from town centers, typically with a new, separate access road. They are often in isolated areas, not near commercial services, town services or local industries. In resort areas, these developments may include condominium projects that are near ski areas but not integrated into compact ski villages. The least developed towns — Norwich, Tinmouth and Ferrisburgh — have seen very little interest in this type of development.


Occurring outside village and town centers, generally along major connecting roadways, commercial strip development is a linear pattern of individual uses, primarily single-story buildings, each with a separate driveway or curb cut and a private parking area. Parcels tend to be as broad as possible, to take advantage of highway exposure; the “strip” is entirely developed for auto traffic, and rarely includes residential neighborhoods or accommodations for pedestrians.

The best examples of commercial strip development among the eight towns are, not surprisingly, in the more-developed areas — Barre and Middlebury, along with Dover and Morristown. These communities have extensive commercial strips, most of them not yet built out to the maximum allowed by local zoning.

Shafisbury and Ferrisburgh have the beginning signs of commercial areas that could become sprawling strip development. The zoning is in place for this pattern, but the market is not yet there. Norwich’s commercial strip is more limited, both by size and by environmental factors.
5. OTHER COMMERCIAL AND INDUSTRIAL AREAS WITH LARGE LOTS AND INEFFICIENT LAYOUTS.

In the towns studied, new commercial and industrial areas have often been developed away from town centers and residential neighborhoods, either at interstate highway exchanges or along major connecting roads. These areas have large lots, with large buildings set far back from the road, surrounded by parking areas. In Middlebury’s expanding industrial park, north of the town center, the average lot size is about 19 acres.

Uses in these areas may include retail, office, warehousing and industrial operations, but do not include residential. The roads are usually wide, designed for high-volume car and truck traffic.

6. OUTLIVING LOCATION OF PUBLIC BUILDINGS.

Because public buildings — including schools, town offices, post offices, police and fire departments, libraries and churches — are so important to their communities and are often the focus of daily visits by a variety of people, their relocation outside of town centers in recent years can contribute to a sprawl pattern. However, there were very few recent examples of this in the towns studied. In fact, several communities had shown town involvement in actually keeping public buildings within the local centers.

Conclusions

The research confirms that the Vermont Forum on Sprawl’s general definition of sprawl fits, both with Vermonters’ impressions and with the actual changes in our communities:

Sprawl is low-density development outside compact urban and village centers, along highways and in rural countryside.

This definition can be expanded, to include the following characteristics of sprawl, contrasted with the characteristics of compact development.

**Characteristics of Vermont’s compact urban, town and village centers:**

- Higher density than surrounding areas
- Mixed uses
- Development with pedestrian, bike, transit and auto access
- Public facilities, services and spaces
- Diversity in the types and scale of housing, businesses, and industries
- Open space, including productive farm and forestland, surrounding the town center
- A unique cultural heritage

**Characteristics of sprawl in Vermont:**

- Large-lot developments
- Low average densities, compared to town centers
- Development requiring an automobile
- Fragmented open space, with a scattered appearance and wide gaps between development
- Separation of uses into distinct areas
- Extension of public services to areas before they are filled in by development
- Lack of economic and social diversity in residential areas
- Lack of public spaces and community centers
- Repetitive, “big box” buildings without distinctive character
- Large paved areas: wide roads, more roads, large parking areas
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MANY PEOPLE WHO HAVE SEEN SPRAWLING DEVELOPMENT within and, especially, outside Vermont picture it as fairly homogeneous — a generalized spreading of buildings, roads, and people from city areas into countryside. But in Vermont this is neither the whole nor the most accurate picture of sprawl.

Research sponsored during 1998 by the Vermont Forum on Sprawl has identified several types of sprawl in Vermont, occurring to some degree in many parts of the state. Sometimes intermingled, sometimes less so, these types of sprawl include:

- scattered residential lots in outlying areas;
- suburban-style housing developments, detached from town centers, with large-sized lots and new, separate access roads;
- strip commercial development, with mostly single-story buildings in a linear pattern along a major roadway; and
- other commercial and industrial areas with large lots and buildings set far back from the road, surrounded by parking areas.

To better understand the particular causes and effects of sprawl in Vermont, it is important to look closely at a cross-section of Vermont communities. During 1998, researchers commissioned by the Vermont Forum on Sprawl studied eight sample communities, in four key types of towns:

- Traditional Centers, with established downtown areas and compact settlement patterns. (Barre City and Middlebury)
- New Growth Towns, communities that usually lie outside a Traditional Center, and have absorbed much of their area’s recent growth. (Morristown, Shaftsbury and Norwich)
- Outlying Towns, primarily rural communities that are not in resort areas. (Ferrisburgh and Tinmouth)
- Resort Communities, towns with a major ski resort, and/or with a high ratio of seasonal to year-round homes. (Dover)

What Is Sprawl in Vermont?, Issue No. 2 in this series, summarized the overall findings of our research on the extent and character of sprawl. This report looks at the causes and impacts of sprawl within communities, based on the research into the eight case study towns.
I. THE CAUSES OF SPRAWL


Thousands of decisions made every day by individuals, business people, and public officials contribute to the growth trends that become sprawl. The Forum on Sprawl's research examined decisions made at the community level, including:

- **Planning and zoning** — regulations, specifications, policy, and planning projects.
- **Public investment** — in sewers, roads, parks, schools, other structures and planning projects.
- **Septic capabilities** — and the limitations they can impose.
- **Other factors** — market influences, limits to village growth, regional influences and public involvement in local planning.
- **Individual choices** — often emerging from tension between personal desires and community values.

It is important to point out that no single choice or action alone causes sprawl. In all cases, sprawl grows from a combination of decisions — and its causes and effects are often intertwined.

For example, public investment in extending a sewer line grows out of the community's earlier decision to accept federal funding to build a sewer system — and out of the resulting pressures to serve a wider area as growth occurs. Extending the sewer line along rural highways and into the countryside thus both results from sprawl and contributes to it.

**Planning and Zoning**

A town's municipal plan, zoning and subdivision ordinances, and other policies that relate to local growth can exert a variety of influences on sprawl. Here are some of the most common of those influences:

- **Specificity and clarity, or their absence, in town plans.** Several casestudy towns had plans with only general policies toward growth. Stated goals such as "protecting rural and community resources" and "maintaining town character" were not always backed by clear directives. However, some town plans had specific goals and objectives that encourage compact center development.

- **Zoning that does not back up the town plan.** Even though most town plans at least tried to describe future growth patterns that were more desirable than sprawl, the zoning ordinance often did not effectively enact these goals. It may be easier to get town-wide approval for general planning language than for specific zoning amendments. Yet without clear directives from both the town plan and the zoning ordinance, development in many towns will likely be most influenced by factors other than the town's stated goals.

- **An incremental effect from various smaller subdivisions.** In many towns, two- or three-lot subdivisions, which often fell through the cracks of local review, gradually added up to an overall sprawl pattern.

- **The layout and location of local zones.** A linear commercial district along a major road resulted, in several towns studied, in commercial strip development. A
scattered or unstructured pattern of zones that fail to create a center resulted in spread-out, ill-defined residential growth.

**Lot size requirements.** In all towns studied, commercial zones outside village centers had minimum lot sizes that were larger, at .5 to 2 acres, than are traditional for village centers. In village areas, residential lot-size requirements were often too large to achieve the compact development that towns said they wanted. In outlying residential areas, usually classified as Rural Residential and Agricultural Zones, minimum lot sizes were most often one to five acres — larger than is needed for a house, yet less than is useful for agriculture or forestry. The regulations indicated no maximum lot size, so actual lots depended more on individual preference and/or what developers considered marketable.

In some outlying zones where towns wished to discourage development, 25-acre zoning seemed to have had the effect of keeping land open in larger tracts. However, many of those areas also have strong natural limits on development.

**Lot coverage percentage requirements in roadside commercial zones.** Compared with the 60-80% building to lot coverage generally found in traditional centers, these requirements ranged from 15% in Shaftsbury’s commercial strip zone to 50% in Dover’s. Those numbers dictate that a large part of any commercial lot will include a buffer of open land, contributing to the spread-out appearance of many commercial areas.

**Commercial frontage and setback requirements.** These usually required 200 feet of frontage, with 50-150-foot setbacks. Traditional village settlements have small (or no) setbacks, and narrow frontages. These provisions make it difficult to achieve the compact settlements that many communities desire.

**Ineffective local provisions for Planned Residential (or cluster) Development.** Some cluster provisions did not allow for smaller lots than would be permitted by regular zoning — so they achieved neither compact neighborhoods nor open space. When clustered developments were built, they were often scattered at some distance from village centers or other neighborhoods.

**Local Government Investment**

The study found that local government investment in Vermont played a smaller role in causing, or facilitating, sprawl than might be expected. (Although this particular research focused on local causes, the Forum on Sprawl has also examined state public investment and policies, and how they affect sprawl.)

**SEWERS**

Local investment in wastewater-treatment facilities has been limited, because systems in Vermont were mostly built with federal funds, and developers usually pay the costs of sewer line extensions. However, the placement of sewer lines — proposed by developers, but ultimately approved by local officials — clearly influences development patterns and has contributed to sprawl. A key issue is often the lack of a defined sewer service area, within which all sewer lines are contained.

"...Ultimately, the best way to cope with sprawl is to stop subsidizing it, so that its full costs are built into public and private decisions about land development." *U.S. News and World, 4/27/98*
Commercial sewer lines placed along major roads in a linear commercial zone, with no limitation on hookups, resulted in classic commercial strips. Lines brought into existing commercial areas with no guidelines calling for compact development patterns also helped create a sprawl pattern.

Residential sewer availability can make possible denser development. But without a plan to ensure this type of growth, developers tend to act on perceived demand for oversized, suburban-style lots.

For some towns, it is the lack of investment wastewater management that has had the biggest impact on creating sprawl, as town officials decide that septic limitations make new, compact village development impractical. Compact development patterns can result from the provision of sewers if there are clear guidelines and regulations for village-style development.

WATER
The presence of municipal water and the location of water lines influences the location and pattern of development — but in the towns studied, for several reasons, local investment in water systems has not been a major factor in causing sprawl.

ROADS
Most Vermont towns are not in the business of developing new local roads; this is usually done by developers, to service new subdivisions. Although these roads may start as private, many are eventually taken over by their town. As a result, developers are deciding patterns of development, while the towns are incurring the long-term costs for road maintenance and repair.

The general repair and maintenance of existing rural roads also contributes to sprawl, by making it more marketable to locate housing in remote areas of town.

OTHER PUBLIC INVESTMENTS
One clear cause of sprawl is the movement of schools and public buildings, such as post offices, to outlying areas. However, the case-study towns showed limited examples of this. In fact, several communities had made concerted efforts, sometimes with public funds, to keep buildings in villages or downtowns.

Septic Capability and Ordinances
In many towns, septic ordinances and the need for on-site septic systems have influenced development patterns.

In towns with poor soils for septic disposal and no sewers, septic needs often dictated large lot sizes and outlying locations. In Ferrisburgh and Shaftsbury, especially, large residential lots were common, presumably so that septic fields could be some distance from house sites and wells. In these towns and in Norwich, poor soils have limited mixed-use growth in village centers and even in newer commercial areas. These three towns have struggled with deciding how much land is needed for septic disposal as they consider how to manage growth and encourage village-style densities.

The lack of local septic ordinances has helped encourage the creation of 10+ acre lots, to avoid state septic review. This is particularly true in towns with poor soils, where it is hard to design septic systems that will pass state review. However, towns that have septic ordinances covering all lots also reported the development of 10+ acre lots to avoid state review.
Other Causes

**Markets have played a large role.** All the towns studied provided examples of this, including:
- people’s desires for large residential lots in the countryside.
- the popularity of 1-3 acre lots in subdivisions with private roads and cul-de-sacs.
- developers’ desires to locate new commercial projects on main roads instead of within villages, for easy access, plenty of parking, high visibility, individual entrances, and other suburban amenities.
- higher development costs — land, parking, renovation, etc. — in town centers, compared with outlying areas.

**Limits to village growth, both physical and perceived, have turned towns toward outlying development.** Several towns expressed belief that their village centers were built to capacity, often because of septic limitations, wetlands, topography and lack of available land. However, the more-developed towns have found options to make downtown development attractive again: renovating existing buildings, expanding sewer availability and solving parking problems.

**Actions by neighboring towns, or other entities, have influenced some local growth patterns.** These actions, often beyond the control of the town being affected, may include expansions of neighboring residential areas, sewer availability, flow-through traffic, and regional or state policy and development decisions.

**The towns that had strong public involvement in the planning process were those that had the clearest vision for how to achieve the growth patterns they desired.** These are the towns that have identified, and are attempting to address, sprawl patterns through the town plan, zoning change proposals, and other local initiatives.

**The Individual Choices We Make**

Where we individual Vermonters choose to live clearly makes a difference — and so does where we choose to shop.

In the statewide poll that was the subject of the first publication in this series, 52% of 2,300 Vermonters interviewed said they shop most frequently in a downtown or town center, while 30% shop most often at malls or shopping centers, and 9% most often at “big box” stores. Yet in the New Growth Towns, significantly fewer residents (45%) shop in town centers, compared to 53% in Traditional Centers and 58% in Outlying Towns.

The poll found that most Vermonters, 61%, feel there is a need for action to stop sprawl. Yet when those polled were given a hypothetical choice among two $100,000 homes — one in an urban or village area close to work, shopping, and public transportation, the other a larger home in an outlying area with more yard space and longer commutes — 74% chose the outlying area, only 21% the compact-center home. This finding zeroes in on what is often a tension between Vermonters’ community values and our individual desires.

These findings were confirmed by conversations between community officials and researchers for the Forum on Sprawl.

Nearly 60% of the state’s population increase from 1950-90 occurred in the New Growth Towns. The Outlying Towns saw 26% of statewide population growth, the Traditional Centers 11%, the Resort Towns 4%.
II. The Local Costs of Sprawl

Within communities, sprawl has many impacts; it often affects the environment, the health of village centers and downtown areas, even the social closeness and cohesion of a town. This research focused specifically on the impacts of sprawl on local public budgets.

Public Costs in the Case-Study Towns

At this early stage of suburban-style development in Vermont, researchers found it difficult to specify the costs of sprawl, separately from the general costs of growth. Most of the towns studied had not seen various patterns of growth for long enough to provide data on the relative costs of servicing these different patterns. As the next section describes, studies from other parts of the country show more clearly the high costs of sprawl.

Currently, these are the most identifiable financial costs of sprawl in Vermont:
- road operation and maintenance
- police service
- planning and engineering studies to address sprawl byproducts, such as traffic, downtown viability, new uses for vacant buildings, new parks or bike paths for outlying neighborhoods, the need for more services and facilities, and pedestrian issues.

Road Operation and Maintenance Costs.

The spreading patterns of residential and commercial development tend to increase local spending on road operations and maintenance.

From 1978-96, the greatest recorded increases in road expenditures were in the New Growth Towns of Morristown and Norwich, and in the Resort Town of Dover. Officials in the rural towns said that spread-out residential development contributed to the need for significant budget outlays for road maintenance.

In communities with downtown shopping areas and commercial strips, the tendency of businesses to migrate to the strips increased road maintenance and repair costs. Some communities are now providing services to two different commercial zones, with the strip development more costly to maintain.

Figure 5

Norwich Subdivisions
because the roads are often longer, wider, and involve complex drainage and engineering issues.

The most-developed towns each have downtown traffic problems that they called a threat to downtown vitality. In all these towns, the traffic problems could have been avoided with more compact and pedestrian-friendly growth. Some towns are now looking at expensive options, such as bypasses that can further contribute to sprawl.

**SEWER AND WATER EXPANSION.**

Although the up-front costs of expanding sewer and water lines to newly developed areas are generally covered by developers and landowners, the long-term costs are born by all ratepayers — and those costs are higher for servicing a sprawling pattern, compared to a compact pattern, of development. Because fees are averaged over the whole service area, commercial strips and sprawled residential areas are not paying the full costs that they create for these systems.

**Public Costs Outside Vermont**

Many studies of sprawl outside Vermont have involved much more developed communities, with clear examples of the costs of sprawl. They have shown, in general, that sprawling patterns of development cost proportionately more, for public services and infrastructure, than denser patterns:

- **Infrastructure** is generally more expensive to build and maintain.
- **Lower-density development** results in more costly services that are linear in nature — roads, curbs, water/sewer lines, storm drains, etc.
- **Separating uses**, as in downtown and strip shopping districts, creates the need for duplicate infrastructure and costs.
- **Scattered and “leapfrog” development** tends to leave behind already-made investments in infrastructure and services. This can create inefficient duplication of schools, fire department, recreation, and other services and facilities.
- **Infrastructure costs** tend to increase with the size of lots, because development is spread out.
- **Dense growth center and urban-scale development** also brings costs — such as shifts to paid fire personnel, and the need for more police and social services. This adds to the complexity of evaluating the costs of different development patterns.
- **Homeowners are increasingly paying** the costs of infrastructure and other capital expenses, as developers pass them along.

Nobody builds on the edge of downtown because they hate downtown. They build on the edge because it is anticipated that their total value will be greater than their total cost. ... [However, the developer does not] include costs to the community, economic and other, that building on the periphery creates, and that accrue to the community but are not borne by the property owner.  DONOVAN RYPKEMA, principal of the Real Estate Services Group, Washington, D.C., from his keynote address to the November 1998 conference, "Making Downtowns and Village Centers More Attractive for Development," co-sponsored by the Vermont Forum on Sprawl.
Exploring Sprawl

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Vermont Forum on Sprawl
A Project of the Orton Family Foundation

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Many thousands of decisions contribute to sprawl in Vermont; among them are decisions by the Legislature and state agencies on public investment, laws and policies. An important part of the research by the Vermont Forum on Sprawl has been to review state investments and policies, in order to understand the various ways they may promote or restrain sprawl. This report, the fourth in a series, summarizes the findings of this review.

Since the early 1970s, Vermont has adopted many policies and created a number of programs designed to combat sprawl — yet other state actions and state-funded projects have led to sprawl, or created conditions that favor it. The state has also subsidized some of the hidden costs of sprawl, sometimes through programs that were intended to work against it.

This brief report does not aim to balance all the issues that state and local officials must consider when allocating funds or setting policy. A program may be identified here as contributing to sprawl yet also have important public health, safety and welfare benefits. Still, the Vermont Forum on Sprawl hopes that this report will lead, where possible, to positive changes in state policies and programs.

State Investments

Act 200, enacted in 1988, requires all state agencies to develop plans that comply with the goals of the Act. This is the first goal of Act 200:

To plan development so as to maintain the historic settlement pattern of compact village and urban centers separated by rural countryside.

A subsection of this goal states: Public investment, including the construction or expansion of infrastructure, should reinforce the general character and planned growth patterns of the area.

Vermont's state government makes many investments, for many reasons — primarily for public health, safety and welfare. Often, these investments are made without consideration for their land use.
implications. For example, the extension of a sewer line to correct a water supply problem may spur new growth on neighboring farmland; and a new school, built far from a town center, can shift local activities and energies to this outlying area.

Act 200 has not insured that state agencies have met its statewide goals. Attention to the state-agency planning that it requires has dwindled severely. The Council of Regional Commissioners, responsible for reviewing agency plans, has no funding. Today, not all state funding decisions work against sprawl, or are even "sprawl-neutral." Loans made by the Vermont Economic Development Authority (VEDA), for example, have no anti-sprawl or pro-town center criteria. And while the Community Development Block Grant program gives preference to projects in downtowns and growth centers, that preference is neither a requirement nor one of four state objectives for the program.

The state has made some concerted efforts to support development in community centers and to protect expanses of working farmland, most notably through the Vermont Housing and Conservation Board. Municipal planning grants were recently required to be made for anti-sprawl purposes, and the Downtown Bill, passed 1998, offers incentives for downtown development.

It is important also to note that while funding decisions may rest with the state, many of the decisions that affect the location of growth are made at the local level.

This section focuses on state funding actions taken within the last five years that may influence land use patterns, and may affect the many decisions by businesses and individuals that either contribute to sprawl or help restrain it.

State Construction Spending

Under an informal policy, new state office buildings are being placed in downtown areas, where attempts are made to reuse existing structures. Of the 17 projects involving state construction spending over the past five years, all but one were in a downtown or town center. It now seems logical to formalize this policy for the long term.

Agency of Transportation

Following its Long Range Transportation Plan of 1995, the AOT has shifted its priorities toward maintaining roadways and developing public transit and rail systems. The agency now has the authority to develop methods of preserving the current highway system by purchasing access rights and limiting curb cuts, thus controlling off-highway development.

In spite of these and other promising changes, AOT actions still have potential for sprawl, primarily through highway expenditures. For example, it has spent $14.5 million over the past five years on bypass projects in Bennington, Chittenden County, Morristown and Williston. Without safeguards, these projects are likely to create conditions that favor sprawl.

One of AOT’s guidelines in its Long-Range Plan for evaluating capital-investment priorities is to "support Vermont communities." This should encourage AOT investment in downtowns and established centers. For changes in a state right of way, AOT is now required to meet with local officials and residents. This local/state coordination may help to better avoid sprawl.

Department of Education

DOE provides funding assistance for school construction projects — and the location of new schools can affect sprawl. In the 1960s and 70s, school construction funds primarily supported the creation of union schools, often in rural areas on former farm fields. More recent data shows a different trend: From fiscal 1994-98, 64% of the average annual school construction aid went for expansion of current facilities, 18% for construction of new facilities, and the rest for alterations and renovations.

In 1999 the Department began operating under a new rule. It is now State Board of Education policy to encourage the use of existing infrastructure to meet the needs of students. The School Construction Guide, developed in 1998, also suggests that schools be located within local growth centers. Nevertheless, given the requirements on state agencies under Act 200, the language of the rule and its guidelines could be more directive toward town centers.
Vermont Housing and Conservation Board
Created in 1987 to provide loans and grants for affordable housing, land conservation and historic preservation, VHCB has been perhaps the most effective state agency in working against sprawl. For housing projects, the Board gives priority to projects that involve neighborhood or downtown revitalization. For farm projects, it favors funding the purchase of development rights on farms in communities that still have a strong agricultural base. Sixty percent of VHCB-supported agricultural projects occurred in the type of communities defined by the Forum on Sprawl as Outlying Towns; 75% of its housing projects have been in Traditional Centers.

Agency of Natural Resources.
Water Supply and Sewage Disposal: The availability of off-lot water and sewage connections is a key feature that can lead to sprawl. Yet the state's project-rating systems for sewage and water-supply projects contain no specific priorities for stimulating community revitalization, replacing and upgrading older infrastructure, or locating in designated growth centers. Likewise, no penalty points apply to projects that would provide sewer or water supply to open spaces in areas not planned for high-density development. Also, funds are not available for communities without a sewer system that would like to enable higher-density development in the village center, but are limited by soil or landscape conditions.

Brownfields: These are properties in town centers or older industrial sites that have been contaminated by hazardous materials. To reduce the fear of liability and encourage the reuse and redevelopment of these properties, the Legislature in 1995 enacted a process by which developers can conduct a cleanup and obtain liability protection. The program is funded by applicants; participation has been small, but legislative fine-tuning last year removed some barriers to entry.

Agency of Commerce and Community Development
As of fiscal 1999, the agency's Municipal Planning Grant Program has a new criterion for its competitive grants: They must foster compact development patterns, including downtown development.

These funds, provided in support of municipal planning under Act 200, dropped from a high of $1.78 million in 1990 to zero from 1995-97, then rebounded somewhat to $200,000 in 1998. Ten years after Act 200 was adopted, only half of Vermont's towns have confirmed municipal plans. The recent years' dropoff of state support for local planning may be an important cause of sprawl.

Vermont Community Development Block Grant Program
This provides about $8 million annually in federal funds as block grants to municipalities, for projects promoting or supporting economic development or affordable housing. The program's Consolidated Plan gives priority to projects that maintain historic settlement patterns — yet that preference is not a requirement, nor is it one of the state's four objectives for the program. From fiscal 1993-98, the program provided over $6 million to projects that are in sprawl locations, but over $15 million to projects in anti-sprawl locations. (Another $2.6 million could not be categorized.)

Vermont Economic Development Authority
VEDA has no sprawl-related criteria for its loans. Two VEDA programs — the Agricultural Finance Program and the Debt Stabilization Program, both assisting family farmers — do work against sprawl. About half of VEDA's dollars support agriculture, the remainder a mix of large and small businesses. Some VEDA funds have supported sprawl development, while others — such as its loan to the Town of Springfield, to renovate the Jones & Lamson plant into a multi-tenant industrial facility — have supported traditional settlements.
STATE POLICIES

Act 60: Equal Educational Opportunity

Act 60 (along with Act 71, which made technical corrections to it) were written to equalize educational opportunity, not to affect land use — yet the Act is likely to have direct impacts on land-development pressures. Overall, it may tend to reduce development pressures.

Because Act 60 provides the same per-pupil block grant to all towns, based on a statewide property tax for education, it reduces the pressure on many towns to accept commercial development — and to compete with neighboring communities to attract development — in order to build the local tax base for education. This may help to curtail sprawl, and it may free town leaders to think about their local economies in terms of jobs, quality of life and vitality of downtowns. It may also encourage a regional approach to economic development.

In the face of concerns that Act 60 might harm small businesses, which are often in downtowns, and encourage larger businesses to locate in sprawl areas, researchers for the Forum on Sprawl examined the Economic Advancement Tax Incentives created by Act 71. While two of the guidelines for applications contain preferences for existing growth centers and downtowns, it is still possible to obtain incentives for businesses outside these areas.

Finally, Act 60 may help to more solidly institutionalize the Current Use Program, which works against sprawl by reducing property tax burdens on farm and forestland.

Act 250: Land Use and Development Control

Vermont’s landmark law can be an effective tool to help restrain sprawl — if it is used effectively. Some sprawl-related issues with Act 250 are:

**Cumulative impacts:** Act 250 has limited jurisdiction over small projects. These can accumulate to create sprawl and other severe impacts.

**Secondary impacts:** The research showed that consideration of secondary impacts, usually given under Criteria 9A (Impact of Growth) or 9H (Costs of Scattered Development), is not applied as thoroughly as it could be to prevent sprawl. It is often difficult to predict potential indirect or secondary impacts of a project over time. In the case of the St. Albans Wal-Mart proposal, the Environmental Board decided that the store’s secondary impacts would outweigh its benefits, and the permit was denied. If a project is located in an existing settlement and fits the scale of development there, it does not have to go through the cost-benefit test of criterion 9H. This is a positive incentive to develop in downtown areas.

**Limited jurisdiction:** Much of what we consider sprawl today involves projects outside Act 250’s jurisdiction. In these cases, project review comes under local zoning and subdivision regulations; and these often do not address sprawl, the costs of scattered development, or a project’s impact on community centers as effectively as Act 250 does.

**Local and regional plans not written clearly enough for Criterion 10:** This criterion, that Act 250 must conform with adopted local and regional plans, is one of its strongest tools — but it is not used to its full potential. Local or regional plans are often not written clearly enough to achieve the goal of directing growth into compact centers. This makes it difficult for the District Environmental Commission to apply them.

**Cost of compliance:** The expenses involved in meeting Act 250’s application requirements may make applicants seek development designs that avoid the law’s jurisdiction. This may be causing sprawl patterns through unreviewed, piecemeal development.

Act 200: Municipal and Regional Planning

Act 200 has not caused sprawl — but the lack of funding and follow-up given to its implementation have greatly weakened its potential effect. Most state agencies have become indifferent about preparing their Act 200 plans every two years, and resources for this planning have become extremely limited. This makes Act 200 ineffective in promoting anti-sprawl goals among state agencies.
The “Ten-Acre Loophole”

Act 249 reviews the designs and issues state permits for construction of on-site septic systems on subdivided lots of less than 10 acres. In towns with no local sewage ordinance, sewage or water-supply systems for single-family homes on lots over 10 acres in size are not reviewed by anyone. Many Vermont property owners subdivide their land into lots just over 10 acres to avoid the septic permitting process. This is widely known as the 10-acre loophole — and it has led to many subdivisions with oddly shaped “spaghetti” lots, with narrow frontages.

When a town has no sewer system, Act 249’s Environmental Protection Rules can restrict the community’s ability to permit or encourage the development or reuse of lots within the town center, because the rules lack the flexibility that is needed to encourage alternative systems.

Department of Public Service: Utility Regulation

DPS’s comprehensive plan includes a policy encouraging “high-density, mixed-use land use planning” and curtailing sprawl — but there is no regulation that requires such a pattern if utility lines need to be extended, for example to serve a new development.

And although Vermont requires customers to pay the full costs of extending public utility lines — about $25,000-$30,000 per mile — these steep costs do not appear to curtail sprawl. Developers can be reimbursed for these costs by people who tap into the line, making it more financially feasible to extend lines and develop outlying lands.

It usually costs more to provide utility and telecommunication service to suburban and rural customers than to those in compact centers. But public utility pricing policies do not reflect this cost difference in the prices paid by consumers. These prices are figured by averaging costs among all users, divided by total units of energy or telecommunication usage. “Deaveraging” utility rates to reflect the real costs of service would more realistically apportion the costs of living outside established centers. DPS policy now is not to do this, because it does not want to penalize rural ratepayers; yet this policy may well contribute to sprawl.

Agency of Natural Resources: Air Quality and Brownfields

ANR’s policies include the 10-acre loophole, which the 1997 Legislature failed to close when it did not act on a “Phase II” bill to reform on-site septic rules.

Rules used to guide permit review by all divisions of the Department of Environmental Conservation are location-neutral, and this may contribute to sprawl. New, stricter air quality standards may result in development permits being denied in downtowns, and development migrating to outlying areas. There is no evidence, however, that this has happened yet.

As discussed above, improvements to the Brownfields program may result in the cleanup and redevelopment of contaminated properties in existing town-center and industrial areas.

Agency of Transportation

In its traditional role of building state highways and maintaining a free flow of cars and trucks, AOT has played a key role in assisting sprawl. However, the agency recently adopted a highway design “Level of Service” (LOS) policy to allow for consideration of a lower LOS standard in densely settled areas. This allows the agency to consider alternative methods for reducing traffic and encouraging alternative transportation modes. Also, the AOT’s Long Range Plan emphasizes improving infrastructure and other conditions for public transit and pedestrian mobility.

Until recently, AOT never denied access to state highways; it only engineered accesses for auto safety. But in 1998, the Legislature amended the highway access law, adding two more criteria, along with safety. These include maintaining public investment in existing highway infrastructure, and complying with local, and regional plans. This new law may help to reduce sprawl if AOT adopts effective policies to implement the law.

Land around interstate exits is often a prime location for sprawl development. State law now requires that development projects within 500 feet of an interstate exit receive an AOT review and permit. Combined with the new authority for access permits, this requirement points to the need for AOT to work closely with local planning and zoning officials, to plan for land use near interstate exits.
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phone: 802 864-6310
fax: 802 862-4487
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This report is also available on the Vermont Forum on Sprawl’s web site: www.vtsprawl.org


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WHERE BUSINESSES AND DEVELOPERS CHOOSE TO PLACE THEIR INVESTMENTS IN CONSTRUCTING OR RENOVATING BUILDINGS — whether downtown or in suburban open spaces — is critical to the pattern of growth in Vermont. As increasing numbers of Vermonters voice concern about the spreading of commercial and residential development across the countryside, it is important to clearly compare the costs of suburban versus downtown development.

"Nobody builds on the edge of downtown because they hate downtown. They build on the edge because it is anticipated that their total value will be greater than their total cost," said Donovan Rydkema, a consultant on economic development who was the keynote speaker at a November 1998 conference, "Making Downtowns and Village Centers More Attractive for Development." The Montpelier conference was co-sponsored by the Vermont Forum on Sprawl along with 12 business, housing, jobs and municipal associations and the state’s Downtown Program.

To prepare this report, the fifth in a series, the Vermont Forum on Sprawl combined information from the conference with data gathered from appraisers, developers, regulatory officials and others involved with recent or planned developments in both downtown and suburban Vermont locations.

The pages that follow summarize what this research found. A general section, "Comparing Costs," is followed by "Looking Closer," which examines specific types of development, along with specific issues — acquisition, construction and regulatory — that face developers in choosing between downtown and suburban locations.

These comparisons clearly show that, if Vermont policy makers wish to encourage more growth in our traditional urban and village centers, the regulatory and cost factors that currently make downtown development more expensive must be addressed.
Eight Reasons Why Developers Choose Outlying Locations

1. **Land costs tend to be lower.** Purchase costs per square foot are typically higher in downtown areas. Also, more than one property may need to be assembled for a downtown project, adding time and costs. In outlying areas, greater available space usually means a simpler land purchase.

2. **Title problems are less likely to crop up.** Because they have a history of use, downtown properties often present complex title issues.

3. **Permitting is less complex and time-consuming.** Proposed downtown projects often require a complexity of permits, and may pose conflicts between permit and code requirements, and historic preservation guidelines.

4. **Zoning may be less restrictive.** Redeveloping a downtown building often involves a change of use, which triggers additional review under local zoning. Big buildings on small downtown lots often cannot meet zoning requirements for setbacks or parking. Seeking a variance or zoning change is costly and time-consuming.

5. **Site preparation is simpler.** Downtown construction often involves demolition of existing structures, while preparing a suburban lot may mean little more than clearing trees. The chances are considerably higher downtown that a project will encounter environmental hazards, unstable ground conditions, deteriorated infrastructure, or other complications — often unforeseen.

6. **Construction is simpler.** Downtown building projects often bring complex challenges: scheduling issues, neighbor relations, crane and staging needs, planned utility outages, even employee parking.

7. **Suburban buildings can be bigger** — and can more easily meet the standardized requirements of national merchandisers. The bigger a new building, the lower its square-foot costs for leasing. In smaller, downtown spaces, economies of scale are hard to obtain, and zoning may limit building heights. Also, corporate retailers tend to seek prototype rectangles with ample floor space. These are easier to provide on new, spacious suburban sites.

8. **Parking is ample.** Providing enough parking downtown for employees and/or customers can be a major zoning, convenience, and cost issue. The more sprawled in size a suburban lot is, the more parking area it is likely to provide.
COMPARING COSTS

Developing Office Space

A developer contrasted the typical construction costs of a suburban vs. a downtown office building. Both hypothetical buildings are 60,000 square feet in total size; the suburban building is three stories high, while the downtown building, on a less spacious lot, rises to six stories.

This analysis includes only construction costs, estimated per square foot. It does not include the costs of acquiring a site. The analysis found:

**Higher suburban costs for:**
- Sitework, on a larger lot with on-site parking; and
- Roofing, with a larger roof area.

**Higher downtown costs for:**
- General conditions: mobilization, crane, staging needs, and safety;
- Concrete and steel: structural support for a taller building;
- Fireproofing: to meet code requirements for a taller building;
- Elevator: additional stops and hoist mechanisms;
- Sprinkler, heating/ventilation/air conditioning; and
- A 250-car parking structure.

<table>
<thead>
<tr>
<th>Cost</th>
<th>Downtown Office Building</th>
<th>Suburban Office Building</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction costs, w/o parking</td>
<td>$65.68 / sq ft</td>
<td>$61.23 / sq ft</td>
<td>$4.39 / sq ft</td>
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<tr>
<td>Parking structure</td>
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<td>$41.67</td>
</tr>
<tr>
<td>Total</td>
<td>$107.35</td>
<td>$61.29</td>
<td>$46.06</td>
</tr>
</tbody>
</table>

*Source: Kessel/Duff Corporation*

Without the parking structure, the estimated costs are 7.2% higher downtown. But with the 250-car parking structure, the downtown project is 75% higher in estimated cost. (No cost estimates were included for the suburban parking lot.)

Developing Commercial/Retail Space

A case study from the Town of Randolph offers a cost comparison for the proposed redevelopment of a supermarket — first on a downtown site, then at a shopping plaza outside the town center.

The proposed downtown project, since dropped, involved demolishing the current supermarket, acquiring seven adjoining sites, and building a 20,000 square foot supermarket. The outlying project, currently proposed, involves acquiring an existing shopping center and building a 34,000 square foot supermarket.

The developer reported these cost comparisons:
- The total land cost of all seven downtown parcels was significantly more than the single, larger, outlying parcel. The downtown site also involved the costs of negotiating and retaining several purchase options.
- Even though the town and the local downtown redevelopment organization supported the central site, the time and costs associated with it would not yield permits soon enough to satisfy one of the purchase agreements. To the developer, the risks and timeframe of the outlying site appeared less substantial.
- Although building costs would be comparable, the downtown site also involved higher expenses for demolition and infrastructure improvements.
- Estimated operating costs would be comparable for both projects.

Although building costs would be comparable, the downtown site also involved higher expenses for demolition and infrastructure improvements.
Developing Housing

The comparative costs of developing housing in downtown and suburban locations are affected by the nature of the project, the location and the site conditions. The research made these findings:

- For a similar building, hard construction costs will be roughly equivalent. The costs will typically be higher downtown for land, demolition and general construction conditions (mobilization, staging and site safety).
- Building townhouses in a suburban area will usually cost less per square foot than constructing a multi-story building downtown.
- Rehabilitating a downtown building for housing purposes will typically cost more, per square foot, than building a new multi-family residential development. The need to remove or neutralize hazardous materials, such as asbestos, lead paint and underground storage tanks, can add 15-20% to construction costs in a rehabilitation project. Health and safety code requirements in older buildings can also add to project costs.
- Rehabilitating older buildings for mixed uses can complicate a project and increase its costs, in part because of code requirements for separating residential and commercial uses. In two Chittenden County examples, the square-foot costs of a downtown, mixed-use rehabilitation were almost double those of a new, multi-story suburban apartment building.

A Closer Focus

Specific Uses

Office

In many parts of the state, professionals clearly prefer to work in a downtown location — provided the downtown offers amenities, such as restaurants and business services. These preferences tend to outweigh the higher costs of renting or owning office space.

For businesses locating downtown, employee parking can pose issues. If employees pay for parking directly, the company’s occupancy costs downtown are close to those for a suburban location. But if the company pays all or part of employee parking, either to a parking garage or by building and owning a parking facility, the total occupancy costs of downtown office space are typically 10-25% higher than the suburban alternative.

Commercial/Retail

For retailers, specific locations can make a big difference. Some downtowns with high retail sales per square foot — such as Manchester, Woodstock and Burlington — can justify higher square-foot development costs, and retailers there can accommodate higher rents. For example, rents on Church Street in Burlington range from $16-$25 per square foot, while those in nearby suburban sites are $11-$16 per square foot.

In the Connecticut River Valley, the lack of a sales tax in nearby New Hampshire affects developers’ ability to attract and keep quality commercial tenants on the Vermont side. Also, the Vermont-side topography, with its broad flat areas, tends to promote commercial strip development. This adds to the severe challenges that face downtown commercial centers on the Vermont side of the river.

In general, corporate merchandising decisions can make downtown sites anywhere difficult to market to certain types of national and regional retailers. These stores look for prototype stores that are single-level rectangles, with floor space to fit their formulas and plenty of out-front, on-site parking. Site selection representatives have limited leverage to sell multi-level stores, or stores with different shapes, street parking, or parking out back.
The size of projects also affects their cost. The bigger a project, the lower its square-foot leasing costs will be. Downtowns with many small spaces have difficulty offering these economies of scale.

**INDUSTRIAL**

To manufacturers, the capacity for an efficient production flow is the key factor in location decisions. In most cases, this involves a linear flow, which downtown buildings often cannot provide. Also, downtown facilities can be difficult to expand when a business needs to increase its workforce or its shipping operations. Manufacturers often build new outside town because they cannot remodel existing downtown facilities to meet their expansion needs.

**HOUSING**

Several developers said new downtown housing construction is impeded by the 35-foot, three-story height limit on buildings enforced by many local zoning ordinances. It is difficult, they said, to achieve enough housing density in three stories to support the fixed costs of a multi-story building.

The potential for redeveloping second and third stories of smaller downtown and village-center buildings is limited by the costs of complying with current codes. Typical market rents are not enough to amortize the development costs, support the fixed costs, and provide a reasonable return on investment.

**Development Issues**

**ACQUISITION**

The purchase prices of downtown properties often do not reflect unseen or contingent liabilities: environmental conditions, structural failures or costs of code compliance. Title problems are also more likely to arise in downtown sites with a complex history of ownership, division, easements, rights of way, etc. Downtown properties may have been allowed to deteriorate; this can be a significant disincentive to investment, in both these and adjoining properties.

A downtown development plan may require assembling multiple sites, and those acquisitions add time, complexity and costs. Also, the Vermont Land Gains Tax can discourage the acquisition, permitting and resale of downtown sites.

**CONSTRUCTION**

Downtown sites, with their history of previous use, may hide surprises — environmental hazards, unstable fill, archaeological significance or deteriorated infrastructure — that construction uncovers. On undeveloped outlying sites, these variables are much reduced.

Downtown construction also involves time-consuming sensitivity and accommodations to neighbors. Working hours can be limited; dust, mud and debris controls can be expensive; utility upgrades and hookups can involve planned interruptions of neighboring service. Limited space at downtown sites requires precise coordination of schedules, deliveries and materials storage. Vandalism and security can also be an expense. Even finding parking for construction workers can be difficult.

For new construction, code requirements are typically straightforward. But developers seeking to renovate downtown buildings often run into conflicts between code and permit requirements, preservation guidelines and field conditions that can mean serious delays, cost increases and unsatisfying outcomes. The processes for resolving these conflicts are often slow and unclear.

**REGULATORY**

There is no regulatory "expressway" for downtown projects. They can involve levels of permitting complexity equivalent to out-of-town projects. Also, downtown sites typically have more neighbors and abutters — thus, more potentially interested parties. In permit review.

A building redevelopment may involve a change of use, which can trigger additional review under local zoning. Often, big buildings on small lots cannot satisfy zoning requirements, such as setbacks or number of parking spaces. This means a lengthy, expensive bid for a variance or zoning change.

Finally, any successful retail business generates traffic and parking demand. Downtown, these impacts may be viewed as a problem, difficult to resolve. Suburban retail sites are set up for vehicle traffic — although the volume of traffic and parking needs generated by sprawl development is, for many, an increasing frustration.
Exploring Sprawl

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Other reports in the Exploring Sprawl series are #1 Vermonters’ Attitudes on Sprawl, #2. What is Sprawl in Vermont, #3. Causes and Costs of Sprawl in Vermont Communities, #4. The Impacts on Sprawl of State Investment & Policies, and #6. Economic and Social Trends Related to Sprawl.

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RESEARCHER: Jeffery Glassberg, Renaissance Development Co., Vergennes / DESIGN: Lisa Cadieux, Liquid Studio / COPY: Doug Wilhelm

Vermont Forum on Sprawl
A Project of the Orton Family Foundation

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AS SPRAWL MOVES ACROSS THE LANDSCAPE, IT CREATES PATTERNS OF IMPACT.

These include quite visible changes in land use and in vehicle traffic on our roads, along with subtler shifts in the economies and the social composition of our cities and towns.

Sprawl is, overall, more than a phenomenon of road and building development. Its long-term impacts can range from lengthening the distances that many Vermonters travel to reach their jobs, to widening the physical separation between people of lower and higher incomes. These and other effects may be altering the social and economic character of many Vermont communities, and of our state as a whole.

This sixth and concluding publication in a series of research reports by the Vermont Forum on Sprawl presents some key indicators that begin, at least, to suggest the wider impacts that sprawl brings to Vermont's land and communities.

**SORTING DATA BY COMMUNITY TYPES AND REGIONS**

The Vermont Forum on Sprawl organized information from a database, assembled by the Center for Rural Studies at the University of Vermont, in order to look at economic and social trends that relate to sprawl in these four types of communities:

*Traditional Centers* — cities, regional centers, town centers and some villages that are home to concentrations of residential population, and offer services to surrounding communities. These are the primary "downtowns" of Vermont.

*New Growth Towns* — communities that have shown high shares of their counties' population growth over the past 30 years. Lying mostly near traditional centers, these also can be called the suburbs or "bedroom communities" of Vermont.

*Outlying Towns* — the small towns and rural villages of Vermont. These are generally some distance away from the regional centers, have lower population growth rates and are without significant resort development. In number, although not in population, this remains the largest group of Vermont communities.

*Resort Towns* — the homes of major ski areas and large concentrations of seasonal homes.

"Revitalization of our communities and downtowns and dealing effectively with sprawl are among the most urgent and difficult issues facing Vermonters."

Howard Dean, MD, Governor of Vermont
Land use trend information came from the Natural Resources Inventory of the U. S. Department of Agriculture — a state-by-state inventory of land use and land cover conducted every five years.

Information from the database, and from the Natural Resources Inventory, was also sorted by six regions of the state: (1):
- Taconic Southwest
- Connecticut River Valley
- Chittenden County
- Champlain Valley
- Northcentral Highlands
- Northeast Kingdom

**LAND DEVELOPMENT COMPARED TO POPULATION GROWTH**

Land is being developed in Vermont at about two and a half times the rate of population growth. Between 1982 and 1992, the amount of developed land in Vermont grew by more than 25%, while the population grew by only 9.8%.

This suggests that we are consuming land at excessive rates, and probably in excessive amounts.

For this same period in northern New England, Vermont had the highest ratio of growth in developed land to growth in population — 2.63, compared with 2.11 in New Hampshire and 1.91 in Maine. Between 1982 and 1992, New Hampshire's developed land grew by 36.9%, its population by 17.5%. Maine's developed land grew by 16.4%, its population by 8.6%.
Converting Farmland to House Lots

The primary uses of developed land in Vermont were “Concentrated Residential” (42%) and non-farm “Rural Estates” (30%), according to the Natural Resources Inventory. “Concentrated Residential” is closely spaced urban and suburban houses and other residences, including strip and cluster home development in rural areas; “Rural Estates” are rural homes surrounded by 1.5-10 acres that are not part of a farming operation.

Nearly 40% of the land newly developed between 1982 and 1992 was formerly cropland and pastures. According to the U.S. Census of Agriculture, over the past 50 years Vermont has lost over 2 million acres of farmland, and more than 10,000 working farms. The 1997 census counted 5,828 farms in Vermont, on 1,262,155 acres of farmland.

On a regional basis, from 1982 to 1992, the southern counties of the Taconic Southwest and the Connecticut River Valley saw land develop at over three times their rate of population growth. The concentrations of ski resorts and vacation homes in these areas may have been major contributors to the development rates.

The lowest ratio of development to population growth was in the Northcentral Highlands.

<table>
<thead>
<tr>
<th>Table 1</th>
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<tbody>
<tr>
<td><strong>Ratio of Development to Population Growth 1982-1992</strong></td>
</tr>
<tr>
<td><strong>Region</strong></td>
</tr>
<tr>
<td>Champlain Valley</td>
</tr>
<tr>
<td>Chittenden</td>
</tr>
<tr>
<td>Connecticut Valley</td>
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<tr>
<td>Northcentral Highlands</td>
</tr>
<tr>
<td>Northeast Kingdom</td>
</tr>
<tr>
<td>Taconic Southwest</td>
</tr>
</tbody>
</table>

Spreading Growth in Smaller Blocks

One key indicator suggests that sprawl-type development is both spreading and dominating land-development patterns in Vermont.

In the measurement of growth, all developed land that is not considered rural has been divided into two categories: large urban built-up and small urban built-up. “Large urban” includes developed areas that cover 10 or more acres; “small urban” involves smaller developed areas, up to 10 acres in size.

**Figure 3**
Rates of Change in Land Development by Region, 1982-1992
Between 1982 and 1992, “small urban built-up” was the fastest-growing development category in all six regions of Vermont. This means that smaller, unconnected blocks of land have been developing more rapidly — in some areas, much more rapidly — than larger, contiguous blocks. The highest small-urban growth rates were in Chittenden County (73%) and the Connecticut River Valley (61%).

The growth in small urban development clearly seems connected to the loss of farmland in Vermont. The region that showed the highest growth in small urban built-up land, Chittenden County, also had the greatest loss of crop- and pastureland.

**Population Growth by Community Type**

In spite of nearly 30 years of state policies encouraging development in existing centers, most of the state’s post-World War II population growth has occurred in New Growth Towns.

Between 1950 and 1990, New Growth Towns absorbed nearly 60% of Vermont’s total population growth, while Traditional Centers gained only 11%. Outlying Towns accounted for 26% of the population increase, Resort Towns only 5%.

As a result of these trends, the portion of Vermonters who live in Traditional Centers has declined steeply. Through the 1950’s and 1960’s, a majority of Vermont’s population lived in Traditional Centers. This share then fell to 49% in 1970, 42% in 1980, and 39% in 1990.

In all six regions, New Growth Towns attracted the highest portions of overall growth. The Northeast Kingdom and the Northcentral Highlands actually recorded population losses in their Traditional Centers, as residents moved to outlying areas. The highest shares of population growth in the New Growth Towns were in these two regions, along with Chittenden County and the Connecticut River Valley. The highest rate of population growth in Outlying Towns was in the Champlain Valley. The Northcentral Highlands, home to three major ski resorts, showed the highest rate of population growth among Resort Towns.
JOE GROWTH BY COMMUNITY TYPE

Statewide, 45% of the job growth between 1980 and 1996 occurred in New Growth Towns, only 21% occurred in Traditional Centers. During this time, the portion of Vermont jobs located in New Growth Towns rose from 18% to 26%, while the portion in Traditional Centers fell from 70% to 56%.

Table 2
Employment by Community Type, 1980-1996

<table>
<thead>
<tr>
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<th></th>
<th></th>
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<th></th>
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</thead>
<tbody>
<tr>
<td>Traditional Centers</td>
<td>133,265</td>
<td>156,496</td>
<td>149,933</td>
<td>+16,688</td>
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<tr>
<td>New Growth Towns</td>
<td>34,483</td>
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<td>69,598</td>
<td>+35,115</td>
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<td>Outlying Towns</td>
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<td>22,514</td>
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<td>+20,350</td>
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<td>Resort Towns</td>
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<td>11,047</td>
<td>+5,693</td>
<td>7.3%</td>
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<tr>
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<td>189,765</td>
<td>247,428</td>
<td>267,611</td>
<td>+77,846</td>
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</table>

More new jobs were created in New Growth Towns than in Traditional Centers. Outlying towns also increased their share of jobs, from 9% to 14%. The number of jobs in Resort Towns doubled during these years.

Yet despite the gain in number of jobs in the New Growth Towns, in 1990 only 25% of the employed residents of New Growth Towns worked in the same towns where they lived. In contrast, 57% of employed people living in Traditional Centers also worked in their towns.

In 1990, commuting times were 11% shorter for working residents of Traditional Centers than for people living in New Growth Towns. A higher portion of Traditional Center residents commute by public transportation or carpool than do New Growth Town residents; a lower share of residents in Traditional Centers drive alone to work, according to U.S. Census data. This suggests that, if the population continues shifting to New Growth Towns, carpooling and use of public transportation could decline.

As Vermonters, we're proud of our quality of life. Rapid, unplanned growth leads to traffic congestion, increased travel time, and reduced family time. If we do not pursue 'smart' growth as Vermont's economy expands, we risk losing the sense of community, the working landscape, and the environmental quality that makes Vermont special.

James Jeffords
U.S. Senator from Vermont

"in six years — from 1990 to 1996 — the average time a family spent in a car every day increased by 22%.

John DeVillars, Regional Administrator,
U.S. Environmental Protection Agency
ECONOMIC TRENDS: RETAIL SALES LOCATIONS

Nationally, since the 1950s, retail sales have shifted from downtowns to suburban areas. Suburban commercial development has come more slowly to Vermont — but areas such as Chittenden and Washington counties, which have seen extensive suburban retail development, have shown a parallel shift in retail sales.

This analysis used U.S. Census of Retail Trade data from 1954 to 1992 for six urban areas in Vermont: Bennington, Burlington with Winooski and Essex Junction, St. Albans City, Newport, Rutland and Barre/Montpelier. Sales data were analyzed for department store and other stores that sold general merchandise, apparel, furniture and home furnishings. These “GAF” stores tend to be located in regional retail centers.

From 1954 to 1992, the average share of county GAF sales in the six urban areas fell from about 70% to 52%. In Chittenden County, GAF sales in Burlington, Winooski and Essex Junction fell from 92% to 49% of the county’s total. With the recent introduction of “big box” stores in Williston, this share is likely to have fallen even more. (In 1997, Burlington had just 31% of the county’s total taxable sales, according to state data.)

In Washington County, Barre City and Montpelier reported 76% of all county GAF sales in 1954. In the aftermath of strip development along the Barre-Montpelier Road in the town of Berlin during the 1960s, and the later construction of a regional mall in Berlin, the two cities’ share of county GAF sales had fallen to 60% in 1992.

The average percentage of all county retail stores in the six urban centers fell from 52% in 1954 to 45% in 1982 — then it rebounded somewhat, to 48% in 1992.

Clearly, one effect of commercial sprawl development has been to shift retail sales in Vermont out of urban centers, into strip developments and other suburban locations.
SOCIAL TRENDS BY COMMUNITY TYPE

The Vermont Forum on Sprawl used data from the Vermont Agency of Human Services, state housing agencies and national sources to develop and sort the following social indicators by type of community:

1. **Family incomes.** In 1979, median family income was 6.5% higher in New Growth Towns than in Traditional Centers. By 1989, this gap had widened to 17.0%.

<table>
<thead>
<tr>
<th></th>
<th>1979</th>
<th>1989</th>
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<tbody>
<tr>
<td>Traditional Centers</td>
<td>$16,452</td>
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<tr>
<td>New Growth Towns</td>
<td>$17,523</td>
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<td>Outlying Towns</td>
<td>$14,920</td>
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<tr>
<td>Resort Towns</td>
<td>$16,654</td>
<td>$36,059</td>
</tr>
</tbody>
</table>

2. **People in poverty.** In 1990, the percentage of people living below the poverty level was 12% in Traditional Centers, 10% in Outlying Towns, 8% in Resort Towns, and just 6% in New Growth Towns.

3. **Education levels.** In 1990, the percentage of people whose education included a high school degree or less was 70% in Traditional Centers, 65% in New Growth Towns, 70% in Outlying Towns and 59% in Resort Towns.

4. **Affordable housing.** From 1986 to 1998, despite the population shift to outlying communities, 75% of the growth in Vermont’s stock of subsidized, affordable housing units was concentrated in Traditional Centers. Only 20% occurred in New Growth Towns. Combined with the job-growth data, this trend suggests that while jobs are going to the New Growth Towns, affordable housing is going to the Traditional Centers — increasing commuting times and costs for many Vermonters of low and moderate income.

5. **Healthy babies.** Traditional Centers had the highest percentages of low birth-weight babies, and of births to single teen mothers, in both 1979 to 1981 and 1989 to 1991. However, Traditional Centers showed a dramatic share of the statewide decline in percentage of infant deaths.

6. **Single-parent families.** Relatively more single-parent families are living in Traditional Centers than anywhere else in Vermont: 24% live in Traditional Centers, 15% each in New Growth Towns, Outlying Towns and Resort Towns.

“We’ve got to redouble our efforts to keep our downtowns strong and vital, to protect our family farms and to maintain the quality of life in Vermont that the entire nation envies. As new options for economic development are considered, the availability and accessibility of affordable housing and transportation must be included in the planning process. Otherwise, working people with limited incomes will have no choice but to live in the city and commute, at significant expense, to new job opportunities in recently developed areas.”

Bennie Sanders, U.S. House Representative from Vermont

In 1979, median family income was 6.4% higher in New Growth Towns than in Traditional Centers. By 1989, this gap had widened to 16.9%.
The mission of the Vermont Forum on Sprawl is to assist Vermont and Vermonters in achieving compact settlement surrounded by rural landscape while encouraging community and economic development to be consistent with the vision.

The Forum is a project of the Orton Family Foundation, a private operating foundation based in Rutland, Vermont, established in 1995 to assist rural communities in promoting their heritage, economic strength, interaction of citizens and respectful use of natural resources.

All reports in the Exploring Sprawl series will serve as the basis for designing solutions to sprawl. The solutions, which will be arrived at with many partners, will be presented in a second series of reports. To obtain more details on all of the research, contact the Vermont Forum on Sprawl, 110 Main Street, Burlington, VT 05401
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This report is also available on the Vermont Forum on Sprawl's web site: www.vtsprawl.org

Other reports in the Exploring Sprawl series are: #1, Vermonters' Attitudes on Sprawl, #2, What is Sprawl in Vermont, #3, Causes and Costs of Sprawl in Vermont Communities, #4, The Impacts on Sprawl of State Investment and Policies, and #5, Costs of Development: Downtowns vs. Open Spaces.

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