

# WINDHAM REGIONAL PLAN



“Sticks & Stones”

Oil on canvas by Jerry Caron

**Adopted October 24, 2006**

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### 3.5 ENERGY AND LAND USE PLANNING

Effective land use planning can and should promote energy conservation. Targeting new development toward areas located close to a community's major roads and existing settlements will minimize the energy consumed by commuting and reduce the energy required to deliver essential services to residents and businesses. Decisions concerning capital expenditures on roads and other municipal infrastructure should be mindful of energy conservation.

Promoting revitalization and infill in downtowns and villages will lead to compact development. Such higher density development would provide more opportunities for alternative transportation such as public transit, walking and bicycling and lessen dependence on the automobile.

The siting, design, and construction of buildings strongly influences the amount of energy needed for heating as well as the amount of electricity needed for lighting. Proper subdivision design, building orientation, construction and landscaping provide opportunities to influence energy conservation both in homes and places of work and as people travel between them.

### 3.6 LAND USE POLICIES

The following policies are organized by land use category, but apply universally where appropriate.

#### **Downtowns and Villages**

1. Direct new growth in the form of jobs, housing, commerce, utilities, industry, community facilities, recreational facilities, and cultural activities to downtowns and villages, with consideration of type and scale of development, in order to keep these centers culturally, socially, and economically viable.
2. Promote the economic and community vitality of the central business districts in Brattleboro and Bellows Falls by supporting revitalization efforts that strengthen and improve viability of the downtown areas.
3. Target federal, state, and private funding to support public transit, bridge and highway repair, other transportation needs, installation of sidewalks and lighting, water and sewer, community development, housing, recreation, and other identified downtown or village needs.
4. Rehabilitate existing housing, commercial and industrial buildings and areas.
5. Promote the attractiveness of downtowns and villages through quality building and landscape design and by maintaining public open spaces for scenic and recreation pleasure.
6. Preserve downtown and village character through appropriate design and scale of commercial, industrial, residential, transportation infrastructure and community structures and uses.
7. Revitalize, strengthen and improve the viability of villages and downtowns through using and maintaining existing historic structures whenever possible.
8. Construct or expand utilities including water and sewer when needed to protect health and ground water resources, and to allow appropriate in-fill and development of lands within villages.
9. Adopt clear land use plans and related implementation policies that will maintain village boundaries,

preserve historic settlement patterns, and prevent rural sprawl.

10. Promote opportunities for alternative transportation development in village and downtown areas.

### **High Intensity Mixed Use**

1. Encourage communities to develop master plans for the transformation of existing commercial areas and planning for New Town Centers.
2. Utilize access management techniques to ensure proper function, safety and performance of the roadway in designing for high intensity mixed use areas.
3. Promote the attractiveness of high intensity mixed use areas through quality building and landscape design and by maintaining public open spaces for scenic and recreation pleasure.
4. Provide for safe mobility of pedestrians and cyclists in the high intensity mixed use areas.
5. Adopt clear land use plans and related implementation policies that will maintain high intensity mixed use boundaries and prevent rural sprawl.
6. Avoid new areas of strip development and seek means to offset the negative effects of existing strip development.

### **Resort Centers**

1. Direct new growth and development in the form of resort jobs, housing, commerce, recreation, and cultural activities to the existing resort centers.
2. Concentrate growth at resort centers to minimize the trend toward dispersed housing and commercial growth.
3. Manage resource lands to preserve their value for water quality, trails, open space, wildlife habitat protection, and scenic enjoyment.
4. Incorporate public transportation in all plans for transportation improvements in the resort centers.
5. Encourage development of affordable housing for employees within resort centers to minimize commuting and energy use.

### **Rural Lands**

1. Develop hamlets at the density of, and in the settlement pattern of, existing historic hamlets and villages.
2. Direct new residential development and services in rural areas to hamlets in order to prevent rural sprawl.
3. Support the development of, and protect the character of, hamlets through appropriate zoning, site planning, and building design.
4. Direct new hamlet developments away from areas that provide critical access to wildlife habitat and ensure that wildlife habitat does not become fragmented by the elimination of connections and corridors between wildlife areas.

5. Develop rural residential lands at densities that will serve to contain rural sprawl, and that are compatible with existing land uses and sensitive to the limitations of the land.
6. Ensure that new development is sensitive to the limitations of the land and avoids important natural resource areas located within the rural residential lands.
7. Direct new rural residential development away from areas that provide critical access to wildlife habitat and ensure, through planning, that wildlife habitat does not become fragmented by the elimination of connections and corridors between wildlife areas.
8. Ensure that new development reflects existing settlement patterns, is low in intensity, and does not conflict with the use and management of forest, agricultural and mineral resource lands, but rather sustains these natural resource commodities.
9. Support a mix of rural land uses including agriculture, housing, home businesses, small-scale commercial and industrial uses, commercial forestry and outdoor recreation, so long as these uses are compatible with one another and do not cause excessive noise, pollution, or disturbance.
10. Manage agricultural and forest lands to promote a long-term sustained yield of crops and timber products.
11. Encourage the use of innovative land-saving techniques - such as cluster development and fixed area density allocation - to protect agriculture, forest, and mineral resource lands from development and fragmentation.
12. Protect green space, particularly along streams and rivers, and other important lands that are valued for trails, open space, wildlife habitat and scenic enjoyment.
13. Encourage the conservation in perpetuity of agricultural lands, including related forest lands and sugar bushes.
14. Encourage full funding of the State Use Value Appraisal Program (Current Use) and enrollment in the program.
15. Protect important natural resources such as fish and wildlife habitats, areas hosting state or federally identified endangered and threatened species, unique and fragile natural areas, wetlands, shore lands, floodplains, aquifer recharge areas, steep slopes, lands over 2,500 foot elevation, ridgelines, essentially undeveloped forest lands which have limited access to an improved public road, and regionally significant scenic corridors and areas.
16. Avoid extension of roads, energy transmission or distribution facilities, or other utility services into or through Resource Lands.
17. Construct corridors for new energy transmission or distribution facilities only when needed, and then only within or adjacent to existing operational energy transmission facility corridors to the maximum extent possible. Minimize their visual impact on ridgelines, slopes and open areas, and avoid important natural and historic resources.
18. Preserve and protect wildlife corridors that join tracts of resource land and important wildlife habitat in order to avoid fragmentation.

### **Growth Centers**

In 2006, Vermont adopted Growth Center legislation to enable municipalities to designate growth centers. Designated growth centers can be located in an area of land that is in or adjacent to a designated downtown and village center or new town center. The following policies apply to designated growth centers.

1. Increase capacity and, where needed, extension of infrastructure to serve designated growth center needs.
2. Establish clearly designated growth center boundaries and related local land use regulations.
3. Rehabilitate and use under-utilized land and buildings in growth centers.
4. Encourage cooperation between designated growth centers and neighboring towns on issues related to growth center development, related impacts, and financial issues.
5. Encourage consolidation of regional and town services where it will avoid unnecessary service duplication.

TransCanada Corporation operates hydroelectric projects along the Deerfield River in Vermont. The Searsburg Dam and Station is rated at five-megawatts, and the Harriman Dam and Station, located in Wilmington and Whitingham, VT, includes three generating units capable of producing 40 megawatts of electric power. Sherman Reservoir lies mostly in Vermont but its electric generation occurs in Massachusetts.

### **Nuclear**

The Vermont Yankee Nuclear Power Station (VY) in Vernon is owned by Entergy Nuclear Northeast, a subsidiary of Louisiana-based Entergy Corporation. VY came on line in 1972 and its operating license expires in March 2012. About 55 percent of the originally licensed 500 megawatts generated is purchased by Vermont utilities, and provides about one-third of electricity consumed in Vermont.

In early 2006 Entergy Nuclear Vermont Yankee's applications to the US Nuclear Regulatory Commission (NRC) and the Vermont Public Service Board (PSB) for a 20 percent power increase were approved. Termed an "extended power uprate," the largest of three uprate types that can be approved, the increase was implemented in 5 percent increments and completed in May 2006.

As this plan is drafted, Entergy has applied to the NRC for a license extension to operate beyond 2012, which will require federal approval by the NRC and state approval by the PSB. Additionally, under state statute that was revised in 2006, legislative approval is required prior to action by the PSB.

The VY reactor undergoes refueling outages every 18 months. When fuel is changed, old fuel assemblies that have been in the reactor for approximately 4½ years are removed to a spent fuel pool, where they are stored and cooled by an active water cooling system. The storage system was originally designed on the assumption that spent fuel would be stored for a minimum of five years and then sent out to be reprocessed (eliminated by federal rule in the late 1970's) or for long-term storage by the US Department of Energy. The latter plan, currently focused on Yucca Mountain, Nevada, has encountered difficulties and still may be decades away. Privately operated interim storage facilities are being explored, including one being pursued at a Goshute reservation in Utah by an industry consortium that includes Entergy, but none is anticipated to be available in the near future. It is certain that the spent fuel pool at VY will reach capacity in 2007 or 2008.

With the spent fuel pool at capacity, and if there is no place to which spent fuel can be shipped for storage or disposal, the alternatives are to shut down the plant or store spent fuel in some other manner on site. "Dry cask storage" is currently used for this purpose at 35 nuclear stations in the US, and several commercial systems are approved by the NRC. Final state approval of an interim dry cask storage facility at the Vernon site was awarded as this plan was being drafted, and construction will begin by summer 2006. Complete decommissioning of the VY plant and dry storage of all spent fuel assemblies generated through 2012 will require approximately 55 casks; extended operation beyond 2012 and a later decommissioning would further increase that number.

### **Wood and Biomass**

Wood as a primary source of home heating peaked in about 1979 at about 48 percent of Vermont households. Airtight stoves remain the most popular wood-burning device, and approximately 50 percent of the households in the region contained at least one wood-burning appliance when the state last published those data.<sup>11</sup> The current state energy plan does not offer current estimates or projections of home heating with wood, but it is very likely that rising oil and electric costs will spur new growth in the

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<sup>11</sup> *Vermont Residential Fuel Wood Assessment 1997-1998*, Vermont Department of Public Service, December 2000.

## 6.6 SCENIC RESOURCES

The region enjoys exceptional scenic quality. Mountain landscapes, farm landscapes, historic villages and towns, ridgelines, the night sky and nighttime landscapes, shorelines, and scenic views and corridors are all highly vulnerable to development. Scenic resource protection measures available to the region's towns include:

- purchase of scenic lands;
- scenic easements, or acquisition of development rights;
- review of the scenic impact of public investment activities;
- designation of scenic roads;
- public education; and
- regulation through zoning and subdivision regulations and the Act 250 development review process.

Maintaining scenic quality requires coordination of these techniques. Many structures such as utility poles, telecommunication towers, wind turbines, cleared powerline rights of way, gas stations, and streetlights are considered by many to be incongruous with our scenic landscape. Careful planning and design will provide development opportunities without adversely affecting the scenic value of the landscape.

### **Sky Glow**

Light pollution or “sky glow” is a cumulative and increasing problem, especially near the urban clusters along the region’s eastern border and near major resort development centers. Light projecting upwards from these areas produces a glow near the horizon which diminishes the natural quality of the nighttime landscape and night sky. As these urbanized areas continue to expand, special consideration needs to be given to lighting design in order to minimize this cumulative adverse effect.

## 6.7 NATURAL AREAS, FRAGILE AREAS AND WILDLIFE RESOURCES

Natural and fragile areas are landscape features with ecological, educational, scenic, and contemplative value. They provide ecological preserves of relatively unaltered environments that are important to wildlife and the natural heritage of the region.

### **State Legislation**

State legislation provides a means to designate Natural Areas (10 V.S.A. Chapter 83) and Fragile Areas (10 V.S.A. Chapter 158). By law, Natural Areas are owned by the Vermont Department of Forests, Parks and Recreation. Any party can own a Fragile Area, but it must have been determined to be of statewide significance. These designations provide protection and the assurance that the areas will be managed to maintain their natural integrity. Hamilton Falls, on Cobb Brook in Jamaica State Park, is the region's only state-registered Natural Area. Consisting of a 40-50 foot high steep cascade with pools above and below and a mile-long chain of smaller cascades, falls, and pools, the site is exceptional for its geology, botany, setting and pristine water. The only state registered Fragile Area is the J. Maynard Miller Memorial Forest (the Black Gum Swamps) in Vernon. Black gum is a tree species of more southerly latitudes; this disjunct forest community is probably a relic from a warmer postglacial climatic period (between 3,000 and 5,000 years ago) when many southern plants extended their ranges into Vermont.

### **Lands Above 2,500 Feet**

Although not formally designated as such, areas above 2,500 feet in elevation are often fragile areas in Vermont (see the Ecological Resources Map). Lands above 2,500 feet are especially vulnerable natural environments because of their generally thin soils, steep slopes, sensitive vegetation, important wildlife habitats and often greater than average precipitation and wind. Some 24,800 acres (4 percent) of the Windham Region are above 2,500 feet in elevation.

### **Ecology**

The Windham Region is rich in areas of high ecological value. The Vermont Nongame and Natural Heritage Program track native rare plants and animals and plant communities that are threatened or endangered. These species and communities are considered rare because they have particular habitat requirements, are at the edge of their ranges, or are vulnerable to disturbance or collection. The general locations of these species and habitats are mapped using Geographic Information Systems (GIS) and species descriptions are available through the state program. The Windham Region is home to numerous Natural Heritage sites and species. These species and their habitats deserve an extra level of protection. The Conte Fish and Wildlife Refuge Environmental Impact Statement has identified four areas in the region as nationally important fish and wildlife habitats: the West River including the Rock River, Winhall River and Wardsboro Brook tributaries, primarily due to the potential for Atlantic salmon restoration; Westminster Flats, for its waterfowl habitat; the Retreat Meadows, for its high value wetland ecology; and the Putney Mountain unit for its Northeastern Bulrush habitat.

### **Fish Habitat**

Most of the region's rivers and streams provide important cold-water fish habitats. Shaded stream banks, clean gravel and rocky bottoms, and clean, cool water are necessary to maintain these cold-water fisheries. Lakes, ponds, and larger, slower moving rivers provide warm-water fish habitat. Healthy fisheries are important for both their ecological and economic value. Sedimentation from runoff, bacteria from septic systems, clearing of streambank vegetation, damming of rivers and streams, and lowering in-stream water flows all impact negatively on these important fish habitats. Wetlands, vernal pools and other surface waters also provide specialized habitats for fish, reptiles, amphibians, mammals and migratory birds. Stream buffers and corridors provide important wildlife travel corridors. (Note: For further discussion of fish and wildlife resources, see also Surface Waters in this Chapter).

### **Remote Forested Areas**

The mountainous, forested landscape remote from community centers is the stronghold and haven for the region's large mammals, which include black bear, moose, deer, bobcat, fisher, coyote, otter, and beaver, and high numbers of deer and coyotes, can also be found in the less remote areas. Completing the forest ecosystem are the smaller mammals, reptiles, amphibians, game birds, raptors, and many valued songbirds and insects that depend on the region's diverse forest plant species. A critical state and regional issue is the maintenance of large tracts of connected forestland to support these species. Certain deer wintering areas and bear habitat are regionally significant necessary wildlife habitat (those habitats needed for a species to continue to thrive within that area). For wintering deer, low-lying softwood stands with southern exposures provide critical shelter from deep snow and cold temperatures. Stands of mature beech and oaks, accessible wetlands, and newly regenerated soft mast areas provide important feeding habitats for the black bear. Bear travel corridors supply a necessary link between feeding and breeding areas. These areas are particularly important since food sources and supplies vary from season to season and from year to year. New roads, guardrails, and construction of homes and other forms of development, as well as indiscriminate timber cutting and outbreaks of tree disease, endanger both the quantity and quality of these important wildlife habitats.

Landowner and Public Education

10. Support landowner and forest-worker educational programs and organizations that teach or demonstrate sustainable forestry and Acceptable Management Practices or that provide educational opportunities to the general public to understand and appreciate the environmental, economic, and recreational benefits offered by the region's forest resource.
11. Encourage employment by private landowners of professional forest managers.

**Scenic Resources**

1. Improve sites that diminish a scenic view, particularly along state and federal highways and within scenic corridors.
2. Encourage scenic easements and implement appraisal practices that encourage donation of scenic easements to public and private natural resource/conservation agencies and organizations.
3. The scale, siting, design, and management of new development shall maintain or enhance the landscape and shall protect high quality scenic landscapes and scenic corridors.
4. Minimize visual impacts of communication towers and other high-elevation or ridgeline structures through co-location, design, siting, and color choice. Design and site communication and other high-elevation towers so that they do not require nighttime illumination.
5. Illuminate structures and exterior areas only at levels necessary to ensure safety and security of persons and property.
6. Arrange all exterior lighting so that the light source (lamp) is not directly visible from public roads, adjacent residences or distant vantage points. Shield exterior lighting so that the light does not project above the lamp.
7. Discourage exterior area illumination of regionally prominent physical features and landscapes. Ensure that any such illumination will not significantly reduce the natural appearance of the nighttime landscape, will not be obtrusive in the viewshed, and will not distract unduly from the nighttime horizon or night sky.
8. Plan new or improved roads to maintain or enhance scenic resources.
9. Screen new development from I-91 and other scenic roads to the greatest extent practicable using vernacular perimeter plantings of hedges, hedgerows, and street trees.

**Natural Areas, Fragile Areas and Wildlife Resources**

1. Protect Natural Areas, Fragile Areas, and critical plant and animal habitats. If necessary, protect these areas from indiscriminate publicity by mapping them only in very general terms.
2. Protect important ecosystems and maintain or enhance the habitat needs and travel corridors required by the region's larger mammals.
3. Protect Natural and Fragile Areas from development. When development is proposed near a natural or fragile area, a buffer strip designed in consultation with the appropriate state agency, must be designated and maintained between the development and natural or fragile area.

4. Support state, federal, and conservation group acquisition of land and/or conservation easements to protect critical wildlife habitats and encourage designation of State Natural and Fragile Areas for significant features and resources.
5. Support local, regional, state and federal programs and incentives that encourage private and public landowners to recognize the economic importance of protecting, maintaining and enhancing fish and wildlife habitats and ecosystems.

#### **Soils and Topography**

1. Take special precautions on slopes to avoid environmental damage, including negative consequences associated with erosion and landslides.
  - Minimize areas of earth disturbance, grading, and vegetation clearing on slopes over 15 percent;
  - Avoid intensive development (other than appropriately designed recreational trails and ski lifts) in areas predominated by slopes exceeding 25 percent or above 2,500 feet in elevation; and
  - Design developments on slopes over 15 percent so as to minimize the potential impacts of slides and earthquakes.
2. Use detailed site studies to determine suitability for development where steep slopes occur with shallow soils. Ensure that all development proposals on such soils provide and conform to an erosion control plan for construction phases of the development and a site drainage plan.
3. Avoid development on wet soils.
4. Avoid development on mucks, clays, silts, and other unstable soils that offer poor support for foundations or footings and are subject to slippage. Conduct extensive site investigation to determine suitability for any development on unstable soils.

#### **Mineral Resources**

1. Develop land with high potential for the extraction of mineral and earth resources so as to not interfere with the subsequent extraction or processing of the resource.
2. Extraction of mineral resources shall not interfere with or have negative impacts on groundwater, air quality (dust and noise), and special community resources (historic sites, recreation areas, or scenic areas). Extraction sites must handle truck traffic without creating unsafe conditions for adjoining landowners.
3. Ensure that effective site rehabilitation plans are provided and implemented.

Southern Windsor/Windham Solid Waste Management District (Grafton, Rockingham, and Westminster), and three (Londonderry, Weston, and Windham) belong to the Londonderry Cooperative Group. Searsburg operates its own municipal facility. Athens relies on private haulers for services and Somerset (an unincorporated town) has no waste management facility.

Under state law, solid waste involves more than just discarded solid material that is of residential or commercial origin.<sup>41</sup> It includes special wastes such as batteries, used motor oil, wastewater sludge, hazardous wastes, septage, and infectious wastes. The proper reduction, management and disposal of this wide variety of material require a concerted effort. Recycling, hazardous waste collection, and composting are important components of solid waste management. District or town-sponsored recycling programs are available to residents of all Windham Region towns except Athens and Somerset.

The disposal of hazardous waste occurs in two different ways. District facilities accept wastes such as antifreeze, waste oil and cadmium batteries for recycling. Other household hazardous waste items (and waste from conditionally exempt small quantity generators) are disposed during special hazardous waste collection days that are held several times each year. Federal and state regulations govern the management and disposal practices of all industries, businesses, and institutions that generate in excess of 100 kg (220 pounds) of hazardous waste or 1 kg (2.2 pounds) of acute hazardous waste per month.

## 7.4 RADIOACTIVE WASTE MANAGEMENT

### Low Level Radioactive Waste

Most low-level radioactive waste (LLRW)<sup>42</sup> generated in Vermont originates at the Vermont Yankee Nuclear Power Station (VY), owned and operated by Entergy Nuclear Vermont Yankee. Smaller amounts come from other sources, such as hospitals and the University of Vermont. Most of the LLRW currently projected to be generated in Vermont will result directly from the eventual shut-down and decommissioning of VY.<sup>43</sup> Low-level radioactive wastes, which may typically include gloves, tools, filter materials, etc., are classified by the Nuclear Regulatory Commission according to their type and amount of radioactivity.

Vermont Yankee LLRW currently is accepted at facilities in South Carolina and Utah. Texas may accept this waste in the future under a compact with Vermont that was approved by Congress in the 1990's as part of a nationwide plan to store LLRW.<sup>44</sup> Texas has not yet finalized its development plans for a low-level waste storage facility, but an application to develop a facility was accepted in 2004 and currently hearings are underway in Texas. Also in 2004, Vermont paid the \$12.5 million fee to Texas, as agreed in the compact.<sup>45</sup>

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<sup>41</sup> 10 V.S.A. 6602(2).

<sup>42</sup> The US Nuclear Regulatory Commission defines LLRW as material that includes items that have become contaminated with radioactive material or have become radioactive through exposure to neutron radiation. LLRW typically consists of contaminated protective shoe covers and clothing, wiping rags, mops, filters, reactor water treatment residues, equipments and tools, luminous dials, medical tubes, swabs, injection needles, syringes, and laboratory animal carcasses and tissues. The most intensely radioactive wastes are typically found in the water treatment residues, discarded parts from nuclear reactors and small gauges containing radioactive material. LLRW is also defined by 10 V.S.A Section 7001(7).

<sup>43</sup> Over the full life of the Vermont Yankee nuclear power station, approximately 75 percent of the total LLRW generated in Vermont is projected from dismantling the nuclear power plant; extending the operating life of the plant would decrease that percentage but increase total LLRW.

<sup>44</sup> The compact originally included Maine, which has since withdrawn.

<sup>45</sup> The cost of the entrance fee was fully borne by Entergy Nuclear Vermont Yankee.

### **High Level Radioactive Waste**

Spent nuclear fuel (SNF), which is high-level radioactive waste, is used fuel that no longer contains enough useful material to economically sustain a nuclear chain reaction. It includes the fuel pellets themselves, the tubes that contain the pellets, and the assembly that connects and holds the tubes in place. Together, these components form a "fuel bundle" or "fuel assembly."<sup>46</sup> Following its use in the reactor, the fuel assembly is intensely radioactive and, while some of the radioactive elements decay relatively quickly, it will remain extremely dangerous for many thousands of years.

Upon removal from the nuclear reactor, all SNF is stored for a minimum of five years in the spent fuel pool, designed specifically for this purpose. From the beginning of commercial nuclear plant operation in the US, it has been the federal government's and the industry's plan to provide for permanent storage at a single location, as opposed to keeping it on-site for an extended period. Currently, all SNF generated to date at Vermont Yankee is stored in the spent fuel pool. In order to bridge the gap between the capacity of the spent fuel pool and the amount of SNF to be generated during the plant's licensed life, on-site dry cask storage<sup>47</sup> would be needed. It is intended that the multi-purpose containers eventually will be removed from those storage casks and sent to a permanent storage facility, if and when that is completed and commissioned. Spent fuel at the decommissioned Rowe (MA) Yankee plant is stored on-site in dry casks.

The US Department of Energy is legally responsible for a permanent storage program. A selected site has been under development at Yucca Mountain in Nevada, intended to isolate nuclear wastes for thousands of years in deep geologic containment. The reliability of that plan has been debated on the bases of overall storage capacity and long-term geologic stability of the site, and recent court decisions have challenged some of the underlying engineering assumptions, thus casting more doubt on the future of this facility. As a fallback to that permanent storage program, development of an "interim storage facility" is being pursued in Utah by a consortium of private companies, including Entergy.

## **7.5 EMERGENCY PLANNING SERVICES**

### **Emergency Planning**

Vermont Emergency Management contracts with most Vermont regional planning commissions to assist with emergency planning on a regional basis. Statewide, this has had the effect of changing emergency planning from a top-down system to a more locally and regionally coordinated process. The WRC is working with member towns, the Local Emergency Planning Committee, the State Emergency Response Commission, the Vermont Agency of Transportation, the Vermont Emergency Management Division, the Vermont Homeland Security Unit, the Red Cross, mutual aid organizations and other regional planning commissions to promote better emergency planning and disaster resistant communities.

Building disaster-resistant communities through sound land use planning is the primary goal of emergency planning. Emergency planning includes risk assessment, mitigation planning and response preparedness. Risk assessment estimates the likely extent and severity of damage from predictable events. Mitigation planning employs sound land use practices and infrastructure management to protect public and private property from predictable damage. At the planning level, response preparedness involves a

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<sup>46</sup> Each fuel assembly in the VY reactor contains 64 tubes and measures approximately six inches by six inches square, and twelve feet long.

<sup>47</sup> This process involves placing spent fuel assemblies into a "multi-purpose canister" (MPC) and placing each MPC into a steel and concrete cask. Casks are placed in a secure location outside the reactor building where they are passively air-cooled. If and when a final storage facility is ready, each MPC would be transferred into a shipping container for transport to that facility. The dry-cask plan for Vermont Yankee would use a MPC containing 68 spent fuel assemblies per canister.

2. Facilitate the orderly development of needed public and private recreational facilities.
3. Encourage public opportunities for multiple use recreation and public access to recreation lands and waters, where the uses do not compete.
4. Maintain high environmental quality in the development of outdoor recreation facilities.
5. Recognize the recreational potential of watercourses and shorelines and provide facilities for water-oriented day use.
7. Develop multi-purpose trail corridors using abandoned railroad beds, Class 4 roads and other public rights-of-way. Protect existing trail corridors.
8. Encourage federal, state, and local acquisition of land and facilities well-suited for outdoor recreation, provided that adequate financial and management arrangements are made with the involved local governments.
9. Support United States Forest Service acquisition, other than by eminent domain, of private in-holdings within and selected lands adjacent to the Green Mountain National Forest, provided that adequate payments in lieu of taxes are made to the affected local governments.
10. Plan and provide recreational opportunities for the disabled and elderly.
11. Provide separate areas or facilities for conflicting uses of recreational resources. For example, swimmers and motorboats should not compete for the use of the same resource when such conflicts create safety hazards or significantly impair the use or enjoyment of the resource.

### **Cultural and Historic Resources**

1. Support efforts to maintain and enhance the region's libraries.
2. Strengthen the role of cultural and artistic disciplines in public education.
3. Encourage community-based facilities and organizations which will support cultural needs, along with improvements in marketing and distribution of the arts.
4. Support organizational and communication networks serving the region to promote the enhancement of cultural opportunities.
5. Protect places of outstanding educational, aesthetic, archeological, or historical value from development that unreasonably impairs their character and quality.
6. Discourage development that would adversely affect cultural resources, including their destruction or alteration, alteration of surroundings, or the introduction of non-harmonious visual, audible, or atmospheric elements.
7. Encourage rehabilitation of significant historic sites and structures. Emphasize adaptive use of historic resources whenever it is economically viable.

and the allowable traffic operations in each category. VTrans, in coordination with the Regional Planning Commissions, analyzed traffic volume, speed limits, density of existing access points, and functional class along the entire length of each state and Class 1 town highway. Based on the criteria for each category set forth in the guidelines, all highways were broken into various segments and designated as an Access Category 1-6. All selectboards in towns with state highway were notified of the proposed access category designations, provided with category descriptions and a map of their town's highways and comments or concerns were requested.

### **Scenic Roads and Vermont Byways**

Scenic Roads are an important recreational and tourism resource and, as such, should be protected. Currently, only a few scenic roads have been officially designated in Vermont under the Scenic Highway Law (Public Act No. 58 of 1977) and none by towns in this region. However, many town plans identify roadways that exhibit particular qualities and that occupy a special place in a community's landscape, history or culture. Attributes of a "scenic road" may typically include forest patterns or significant stands of trees, scenic terrain, and distant views, road surface or road layout characteristics, nearby surface waters, picturesque farms or villages, stone walls and cemeteries, or unique man-made and natural objects.

The Vermont Byways Program acknowledges that many varied attributes of a given road may deserve recognition and protection. A "Vermont Byway" is a highway or other public road that has special scenic, historic, recreational, cultural, archeological, and/or natural qualities and that is formally designated by the Vermont Scenery Preservation Council and Vermont Transportation Board in order to enable management practices and programs that focus on any or all of those qualities. The Connecticut River Byway (VT 142 and US 5) and the Molly Stark Trail (VT 9), both designated Vermont Byways, traverse the region. The Connecticut River Byway, designated a National Scenic Byway in 2005, is located on both sides of the Connecticut River in New Hampshire and Vermont and stretches from their borders with Massachusetts to the Canadian border. The Molly Stark Trail Scenic Byway encompasses all of VT 9 from the Vermont border with New York to New Hampshire.

### **Aesthetics, Preservation and Design of the Highway System**

In response to the concern that the roadway and bridge designs need to be "sensitive to the social and environmental context of Vermont"<sup>75</sup> the State of Vermont adopted Vermont State Design Standards for roadway design. The State of Vermont also established a Historic Bridge program to protect historic transportation structures. To further address the issues of aesthetics and livability in the communities adjacent to the roadways, VTrans currently has a Traffic Calming Protocol that agencies need to follow when considering traffic calming projects on state highways and when using federal and state dollars for such projects. The WRC has been active and supportive of these innovative programs and will continue to review transportation projects to assure compatibility with the Regional Plan.

## **9.2 FREIGHT TRANSPORTATION**

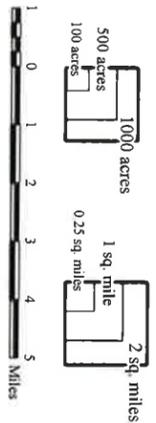
According to the US Department of Transportation, trucking remains the dominant mode to transport freight. From 2005 to 2020, within New England, freight traffic is anticipated to grow 79 percent. While freight encompasses truck, rail, water, and air, Vermont's statewide mode share for all movements consists of 90.4 percent by truck, 8.3 percent by rail, and 1.3 percent by other.<sup>76</sup>

<sup>75</sup> Vermont State Design Standards, October 1997.

<sup>76</sup> Vermont Freight Study, 2001.

# 2006 Windham Regional Plan



June 2006: c:\RegPlan06\Development.mxd

Note: This map should be used for general reference and planning purposes only.

Sources (refer to appendix): 17; also 1, 2, 3.

## Regional Development Pattern

This map attempts to show the pattern of development across the Region by displaying structures and major roads. While features other than the structures and roads displayed here can constitute development, defining these other feature and then mapping them would be difficult. By showing roads and structures, the map, taken in a regional context, should give the viewer a general idea of where in the Windham Region the majority of human activity and land modifications are located.

-  Structures
-  Interstate highway
-  Federal, state, town highway (excluding Class 4 town highways)
-  Major river
-  Major lake or pond

