

6. COMMUNITY SERVICES AND FACILITIES

Community facilities and services are provided by the Town or other quasi-public entities for the health, benefit, safety, and enjoyment of the general public. They include police and fire protection, rescue services, utilities, solid waste disposal, library services, public water supply and wastewater disposal systems. Careful planning is essential for community facilities and services if they are to meet local goals for future growth and sustainability. If the facilities are at capacity, further development may strain them, causing financial burdens and environmental problems. If facilities are inadequate, they may prevent the Town from adequately meeting existing needs or accommodating desirable growth. The following is an inventory of the services and facilities available in Essex and an evaluation of their ability to meet future needs. Map 1, *Community Facilities*, identifies the locations of the municipal facilities discussed in this chapter.

6.1 Solid Waste

The Town of Essex formerly operated a municipal landfill off VT Route 2A. By law, the landfill was closed. The closed landfill remains on the list of active Comprehensive Environmental Response Compensation and Liability Information System (CERCIS) sites (EPA Superfund sites) with a low rank priority relative to its potential to be a risk to the general public. The site – which operates under an Administrative Closure Order issued in November, 1992, and in effect until 2013 – is tested twice yearly and will be monitored for the foreseeable future. The Town is a member of the Chittenden Solid Waste District (CSWD) which handles disposal of the Town's solid waste. The former municipal landfill is now serving as a transfer station for the district with drop-off and storage facilities.

CSWD continues to pursue a lined landfill site within Chittenden County for long term disposal of solid waste. The district's preferred site is located in Williston, but in the past a second potential site in Essex has been discussed. The Town firmly believes that the RPD-I District and the abutting I-1 District are an inappropriate location for a regional landfill. The Town is unalterably opposed to a landfill in these districts.

6.2 Stormwater

Essex has no central stormwater system serving the entire town, but rather a collection of independent culverts, catch basin systems with interconnected pipes and some stormwater detention basins. Not including road cross culverts or soil discharge systems, there are more than 195 separate catch basin/piped discharge stormwater systems, and more than 1,400 catch basins, 400 of which are either state or privately owned. The Public Works Department maintains all culverts and catch basins within the public right-of-way, as well as those permitted systems specifically accepted by the Town. In almost all cases, the detention ponds and stormwater discharge permits have been issued by the state to developers or homeowner's associations.

The Environmental Protection Agency published a Final Rule (64CFR68722) titled Stormwater Phase II that requires certain designated urban core areas including Essex to develop and implement a comprehensive stormwater management program. The Town has been issued a National Pollutant Discharge Elimination System (NPDES) Phase II stormwater permit (#3-9014), which was extended in 2008 that is intended to:

- Reduce the discharge of pollutants to the maximum extent possible (MEP),
- Protect water quality, and
- Satisfy the appropriate water quality requirements of the Federal Clean Water Act.

To accomplish these goals, the Phase II permit defines that a small stormwater management program of Municipal Separate Storm Sewer Systems (MS4) must contain six elements to be implemented in concert. They are:

1. Public Education and Outreach

Distributing educational materials and performing outreach to inform citizens about the impacts polluted stormwater runoff discharges can have on water quality.

2. Public Participation/Involvement

Providing opportunities for citizens to participate in program development and implementation, including effectively publicizing public hearings and/or encouraging citizen representatives on a stormwater management panel.

3. Illicit Discharge Detection and Elimination

Developing and implementing a plan to detect and eliminate illicit discharges to the storm sewer system (includes developing a system map and informing the community about hazards associated with illegal discharges and improper disposal of waste).

4. Construction Site Runoff Control

Developing, implementing, and enforcing an erosion and sediment control program for construction activities that disturb one or more acres of land (controls could include silt fences and temporary stormwater detention ponds).

5. Post-Construction Runoff Control

Developing, implementing, and enforcing a program to address discharges of post-construction stormwater runoff from new development and redevelopment areas. Applicable controls could include preventative actions such as protecting sensitive areas (e.g., wetlands) or the use of structural measures such as grassed swales or porous pavement.

6. Pollution Prevention/Good Housekeeping

Developing and implementing a program with the goal of preventing or reducing pollutant runoff from municipal operations. This program must include municipal staff training on pollution prevention measures and techniques (e.g., regular street sweeping, reduction in the use of pesticides or street salt, or frequent catch-basin cleaning).

In April 2003, a stormwater management plan was adopted by the Selectboard. The plan helps to manage the following activities through:

1. Requiring new developments to create natural usable vegetated depressions through grading which act as retention basins during peak storm events and reduce the need for stormwater retention lagoons.
2. Requiring outfalls from new or replacement storm drainage systems to incorporate natural or man-made methods of energy dissipation to reduce erosion and siltation in downstream elements.
3. Exploring creative alternatives to open stormwater lagoons.
4. Reducing the size of large stormwater collection systems by breaking the system into smaller components involving less runoff in each component.
5. Requiring new developments to provide a more comprehensive and complete erosion control plan, temporary and permanent, prior to project approval.
6. Encouraging the use of subsurface infiltration dispersal systems where suitable soils are available and where technically feasible.
7. Identifying existing areas that are deficient in storm drainage collection and allocating funds to correct these deficiencies.
8. Establishing a maintenance fund to provide for the repair and replacement of storm drainage collection system components and ancillary equipment.
9. Encouraging practices that limit or reduce erosion.
10. Encouraging maintenance practices for streets and parking areas that include regular sweeping and collection of surface materials.
11. Providing subsurface drainage systems, such as under-drains, in areas where existing infrastructure damage has been identified as being caused by groundwater.
12. Establishing procedures for the identification of illegal cross connection with the sanitary sewer and utilizing these procedures to detect and eliminate these connections.

The Town will be required in the future to provide specific stormwater system improvements at a number of locations that have yet to be designated. As the Vermont Agency of Natural Resources completes its watershed studies and prepares “pollutant load” limits, permits will be issued to construct treatment systems of some form where none exist today. Primary emphasis will be placed on improving the water quality in the Town’s two impaired watersheds – Sunderland Brook and Indian Brook.

6.3 Sanitary Sewer

In the 1970s, the Town of Essex completed a study and design of a sanitary sewage collection system to eliminate multiple point sources of pollution that existed throughout the Town. It was determined that the most economical means to treat the wastewater was through an upgraded sewage treatment plant located on Cascade Street in the Village of Essex Junction. To accomplish this goal, the Town of Essex, the Town of Williston and the Village of Essex Junction formulated an agreement which identified methods to allocate costs for the construction of a secondary treatment

facility large enough to handle the anticipated sanitary sewage flows from all three communities. Sanitary sewage flows from the main IBM plant were not included in the agreement since IBM operates its own separate treatment facility.

Each community estimated their potential growth over the next 20 years and what areas would be connected to the sewer and arrived at the following distribution of the plant's treatment capacity:

Essex Junction	1,220,000	gallons per day (gpd)
Town of Essex	1,100,000	gallons per day (gpd)
Town of Williston	530,000	gallons per day (gpd)
TOTAL PLANT CAPACITY	2,750,000	gallons per day (gpd)

The Town constructed the new sewer system in 1984, using state and federal grants which defrayed about 85 percent of the total cost of the system. The primary purpose of these grants was to abate existing pollution of the surface waters of the state. The total Town share of the construction of sewers, plus a share in the capacity of the Village sewage treatment plant was \$1,740,000. This cost was paid back by only the users of the system and the debt was retired in 2005.

Under the original design for the system, the first-year flow was estimated to be 240,000 gallons per day (gpd) from initial users, 235,000 gpd from existing users who would not connect during the initial connection period, and 525,000 gpd from potential future growth. Zoning regulations in effect at the time of the design were used to calculate density and sanitary sewage flows from underdeveloped land.

Table 6-1 shows the average daily flows since the construction of the system in 1984. It was assumed 38,000 gpd would be added to the system every year over a 20-year period. Since 1986, the average flow added per year has been 19,421 gpd. In 1998, three events occurred which had significant impact on the municipal wastewater system and future growth within the sewer core area.

Event #1: The Town of Essex agreed to participate in the upgrade of the Village Wastewater Treatment Facility, based on a need for increased capacity in Williston. An equalization basin was added with automated flow control at the five major pump stations in the three communities, which directly discharge to the treatment facility. This resulted in more total capacity with the following distribution:

Village of Essex Junction	1,220,000 gpd
Town of Essex	1,100,000 gpd
Town of Williston	<u>780,000 gpd</u>
	3,100,000 gpd

Event #2: The Town contracted with Donald L. Hamlin Consulting Engineers and Land Planner David Spitz to prepare a report entitled "Sanitary Sewer System Capacity Study Update" and an "Allocation Study". This report studied the existing sewer core area and using current zoning identified a revised sewer core boundary as well as available capacity. In February 2003, Hamlin updated the December 1998 report. The updated report estimates sewage flow in 2008 will be 753,310 gpd and full build-out could occur in 2023. At that time, the wastewater treatment use would be exceeded by about 125,810 gpd. Also, the report identified physical improvements that must be made to the system to carry out the 2023 "full build-out model."

Event # 3: Based upon the results of the December 1998 sewer study, the Selectboard adopted a Sewer Allocation Policy and established the policy as Chapter 10.18 of the Town Ordinances. This ordinance governs the future allocation of reserve capacity. It creates a category of developable land entitled category “B”, which provides for future service by municipal sewers but creates additional requirements for consideration of service to these areas. This was done in an attempt to limit the growth to the 1,100,000 gallons of available capacity. In addition, due to the February 2003 study update, the Selectboard amended the Sewer Use and Sewer Allocation Ordinances, accordingly.

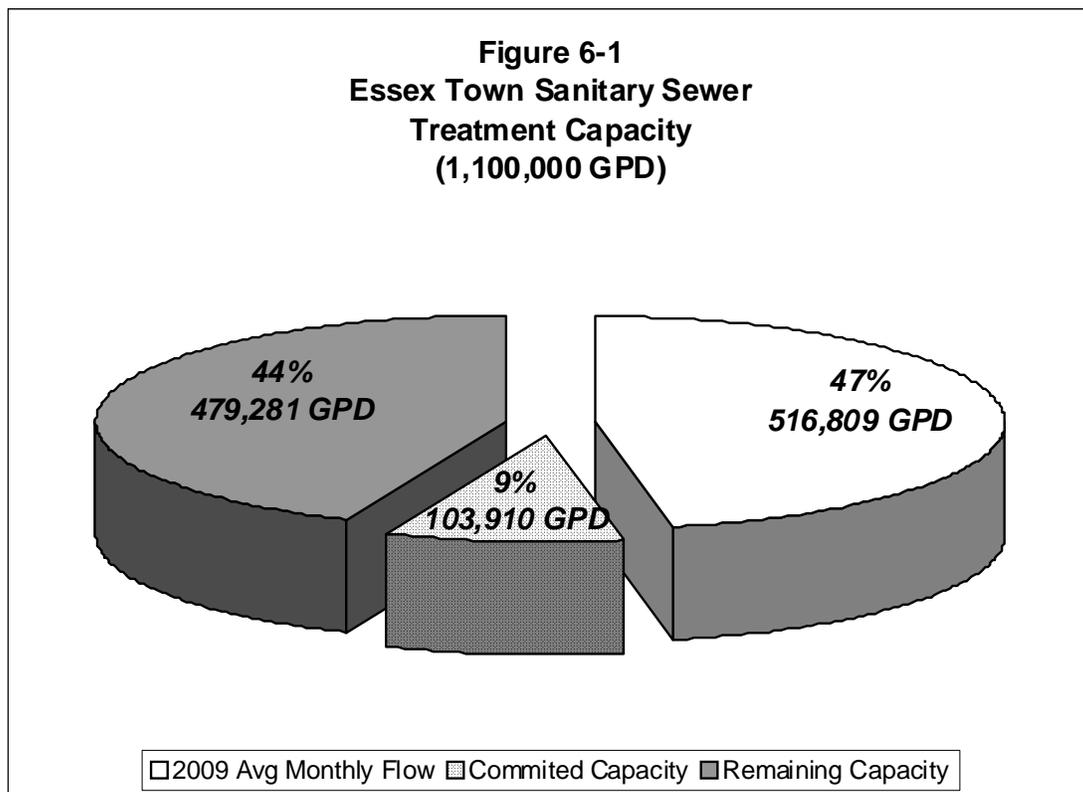
**Table 6-1
ESSEX TOWN SEWER FLOW HISTORY (1990-2008)**

Period	AVG. FLOW	Yearly Change	Percent Change
	Gallon/Day		
Jan 90 to Dec 90	431,276	76,898	22
Jan 91 to Dec 91	459,541	28,265	6.50
Jan 92 to Dec 92	437,234	-22,307	-5
Jan 93 to Dec 93	464,477	27,243	6
Jan 94 to Dec 94	484,299	19,822	4
Jan 95 to Dec 95	488,022	3,723	1
Jan 96 to Dec 96	532,108	44,086	9
Jan 97 to Dec 97	502,176	-29,932	-6
Jan 98 to Dec 98	567,763	65,587	13
Jan 99 to Dec 99	507,095	-60,668	-11
Jan 00 to Dec 00	537,933	30,838	6.10
Jan 01 to Dec 01	487,200	-50,733	-9.40
Jan 02 to Dec 02	532,056	44,856	9.20
Jan 03 to Dec 03	540,658	8,602	1.60
Jan 04 to Dec 04	589,883	+49,225	9.10
Jan 05 to Dec 05	579,498	-10,385	-1.76
Jan 06 to Dec 06	624,004	44,506	7.68
Jan 07to Dec 07	559,056	-64,948	-10.41
Jan 08 to Dec 08	532,310	-26,755	-4.79

Source: Essex Public Works Department

Town sewage flows are currently averaging 616,809 gpd or almost 47 percent of the Town’s new allocated treatment capacity. This is a decrease of more than 73,000 gpd during the past four years. This is due in part to new, more accurate flow metering methods and the decrease in industrial flows from the Town, as shown in Figure 6-1. In September, 2005, 44,000 gpd was approved for projects that are either in the process of connecting to the system, have yet to be built, or comprise existing

buildings within the sewer service area that will connect to the system in the future. This figure does not include projects that have not received final permits from the Town. Subtracting the 103,910 gpd from the remaining 583,191 gpd leaves approximately 479,281 gpd for new users in the sewer core. If this capacity were allocated on an equal basis each year at the same rate at which capacity was used per year from 1986 to 2003, the reserve capacity would be adequate for an estimated 15-20 years, as shown in Figure 6-2. Planning for additional capacity should begin in the 2018-2020 time period.



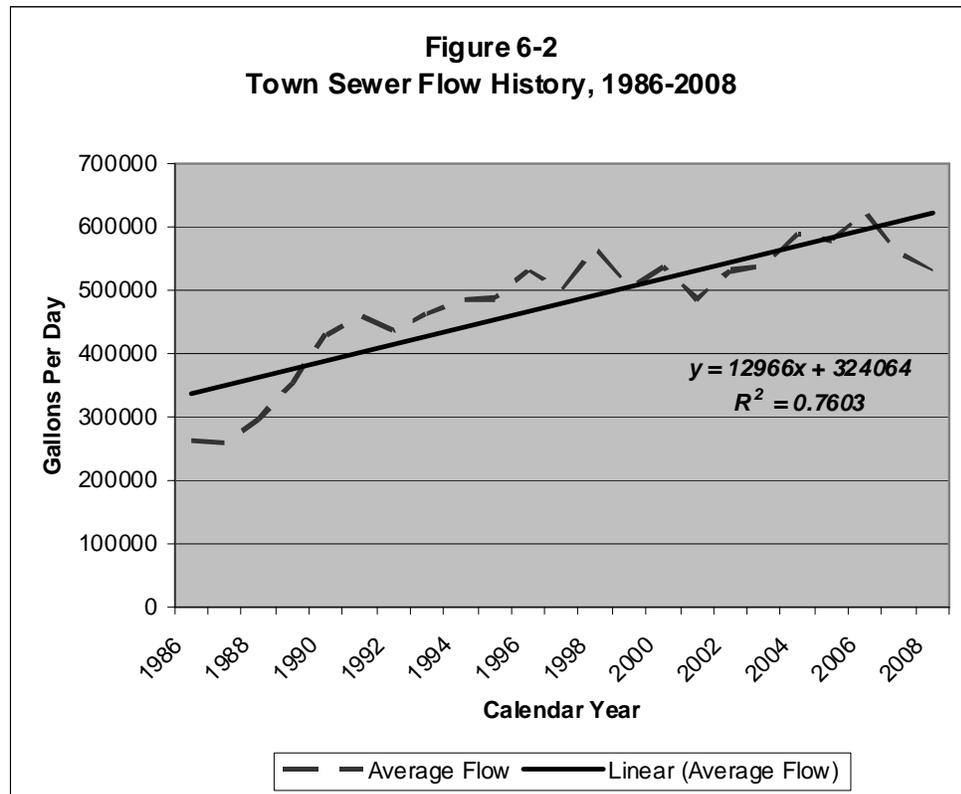
Source: Essex Public Works Department

Past Town Plans note areas needing sewers due to the experience with on-site septic system failures. The Wildwood Drive area of Pinewood Development was connected to municipal sewer in the fall of 2000. The other areas still forecast for a future need for municipal sewer are:

1. Pinecrest/Painesville/Pioneer Acres residential area (on-site failures)
2. Kellogg/Susie Wilson Road (expansion to promote economic development)
3. River Road near Sand Hill Road (north side, some housing units)
4. Cemetery Road

The plan to proceed with the extension of municipal sewer service to Blair Road, portions of Pinecrest from Susie Wilson Road to Pioneer, Pioneer from Pinecrest to Ira Allen Drive, and Ira Allen Drive is currently on hold for an indefinite period. This area has been identified as containing

a high percentage of small lots and a history of septic system problems. The design for this project was completed in 2007. The project has been shelved by the Selectboard due to insufficient funding.



Source: Essex Public Works Department

The 2003 Hamlin Study identified sections of the sewer system that needed to be upgraded to transmit the flow to the Village wastewater treatment plant to carry out the 2008 build-out model. These improvements included replacing the three pumps in the Alder Brook Pump Station with new variable speed pumps. The Alder Brook Pump Station was upgraded during the second half of 2009.

The other 13 pump stations have adequate capacity through 2008 and beyond. Future issues regarding management of the system include:

1. The need to begin updating the sanitary Sewer System Capacity Study in the 2010/2011 timeframe.
2. The need to amend the Sewer Use and Allocation Ordinances as appropriate based upon the results of the 2007 Sewer Study update.

Because Town residents in the sewer core are billed for their household's water use, to save them money- and to save energy- the Town may wish to encourage the use of water-saving devices, such as low-flow toilets and shower heads, front loading washing machines, and grey water systems.

6.4 Water

The Town of Essex operates a distribution system of waterlines, fed with water supplied by the Champlain Water District. Within the area outside the Village, there are two principal service areas. There are more customers on the Town water system than the Town wastewater system. Table 6-2 provides the history of water usage back to 1998.

Period	Avg. Gallons Used Per Day	Percent Change From Previous Year
Jan 1998 - June 1998	824,881	1.9%
July 1998 - Dec 1998	779,676	-7.5%
Jan 1999 - June 1999	816,071	-1.1%
July 1999 - Dec 1999	846,708	8.6%
Jan 2000 - June 2000	768,542	-5.8%
July 2000 - Dec 2000	842,407	-.5%
Jan 2001 - June 2001	849,641	10.6%
July 2001 - Dec 2001	923,013	9.6%
Jan 2002 - June 2002	813,448	-4.3%
July 2002 - Dec 2002	951,594	3.1%
Jan 2003 - June 2003	883,722	8.6%
July 2003 - Dec 2003	965,242	1.4%
Jan 2004 - June 2004	819,402	-15%
July 2004 - Dec 2004	830,872	1.3%
Jan 2005 - June 2005	779,754	-6.15%
July 2005 - Dec 2005	907,260	14.05%
Jan 2006 - June 2006	774,446	-14.63%
July 2006 - Dec 2006	881,431	13.81%
Jan 2007 - June 2007	717,333	-18.62%
July 2007 - Dec 2007	773,407	7.82%
Jan 2008 - June 2008	724,568	-6.32%
July 2008 - Dec 2008	795,502	9.79%
Source: Essex Public Works Department		

The low service area lies below the elevation of the Essex Junction storage tanks, with overflow at 508 feet USGS. It consists of Fort Ethan Allen, Susie Wilson Road, Pinecrest, Kellogg, VT Route 2A – generally those areas in the west end of Town. The highest elevation served in the low service

area is approximately 420 feet USGS, resulting in a static pressure at the high point of 38 pounds per square inch (psi). The area served within this low pressure zone also includes the City of Winooski and portions of the Town of Colchester.

The high service area is in the eastern and northern portions of Town. It is between the elevation of the Essex Junction storage tank (elevation 468 feet.) and the two Essex Town storage tanks (elevation 640 feet). The Town has 500,000 gallons in storage in the tank on Bixby Hill and 680,000 gallons in storage in the Saxon Hill Tank. Static pressure ranges from more than 110 psi along River Road to 43 psi at the high point near Butlers Corners.

Within the existing water system, a number of areas have been identified for expenditure of capital funds. The two most significant categories are: (1) insufficient pipe size to accommodate the fire demand and (2) dead-end lines that need to be looped (connected) to improve water quality, pressure and the ability to have a line break without disruption of service. Several loop connections have been completed including Gardenside Lane, Kellogg Road, Butlers Corner/VT Route 15, and lower Sand Hill Road to VT Route 117 upgrades.

Future water projects that would complete “loops” are:

1. Pinecrest to the Village boundary on VT. Route 2A (future)
2. Douglas Road to Willoughby Drive (future)

There is another category of potential projects that could prove to be very costly. In the late 1960s and early 1970s, the Town water system went through a period of rapid expansion. The pipe used during this period was coated asbestos-cement. This pipe is subject to shear failure when the ground shifts because of its lack of tensile strength. In some areas, it has also “softened” due to constant exposure to a high water table. At present, there is no plan to systematically replace this piping; it is likely to become a capital need in the time frame from 2010 to 2020.

Future needs which must be addressed include:

- Actively participate in the Champlain Water District operation planning process through the Town’s CWD representative.
- Upgrade current water usage metering system with radio transmitting meter registers.
- Utilize the “Watercad” software recently obtained and model the Town’s water system to:
 - a) determine reasonable limits of service area
 - b) deficient pipe line sizes
 - c) low fire flow protection areas
 - d) refine a capital investment program
- Replace all asbestos cement waterlines and unlined cast iron pipe now in use. This replacement should be phased and coordinated with other infrastructure repairs or improvements.
- Perform leakage detection tests.
- Maintain records of reported private water system failures or contamination to be used in the evaluation of these areas. If a municipal water extension is required to serve such an area, the project shall be funded by those benefiting from the extension.

- The Town of Colchester is in immediate need of additional water to support its development activities. Their estimated long term need is approximately 600,000 gpd. To meet its water needs, the Town of Colchester considered expanding its water storage facility either at the present location on Water Tower Hill or possibly at a site in Essex off Gardenside Lane by the Essex Landfill. An agreement was proposed between the two utilities on cost sharing and reserve capacity at the proposed tank. Essex currently does not foresee the need for more capacity now or in the near future. The Town of Colchester is currently planning on increasing the size of its present tank on Water Tower Hill. It may be determined at a future date that additional capacity is required but until then the joint Colchester – Town Project near the Town Landfill has been tabled.

Because Town residents in the sewer core are billed by the Champlain Water District for their household's water use, to save them money – and to save energy – the Town may wish to encourage the use of water-saving devices, such as low-flow toilets and shower heads, front loading washing machines, and grey water systems.

6.5 Police

The Town of Essex Police Department was formed in 1980 to serve both the Town of Essex and the Village of Essex Junction. The Department is overseen by the Police Chief who is appointed by the Town Manager. In 2005, the department had 26.2 sworn officers, four (4) full-time dispatchers, two (2) other full-time civilian employees and a complement of part-time dispatchers. The officer to population ratio in Essex is 1.3 officers per 1,000 residents. The national average is 2.1 officers per 1,000 residents. Neighboring communities of Burlington (2.4), Colchester (1.6), South Burlington (2.2), Williston (1.4) and Winooski (2.3) presently average 2.0 officers per 1,000 residents.

A major thrust is being made to provide a proactive approach to deter crime by forming partnerships within the community. Programs such as Business Watch, Neighborhood Watch, robbery seminars, neighborhood meetings and Project Northland, a youth drug & alcohol education program, have been initiated to establish these partnerships.

In addition, the Essex Community Justice Center (CJC) has been growing in its capacity to address low-level crime and conflict since its inception in 2003. The CJC is a community organization where citizens can work together to prevent crime, resolve conflicts, and render justice in areas that are most important to them. It is a means for the community to take responsibility for its quality of life by collaboratively using the principles of restorative justice.

The demand for police services, patrol, motor vehicle enforcement, bicycle safety training, investigative, crime prevention and court preparation has stretched the department's resources to the limit. Furthermore, the present police facility at 81 Main Street is inadequate. The staff is currently housed in 2,050 square feet on two floors shared with the Town's administrative offices. A portion of a building at 8 Essex Way is also being utilized by the department to house its detective division due to crowded conditions at 81 Main Street.

To summarize, the following issues need to be addressed for the Police Department within the next five years:

1. Adequate police facilities to house the entire department in one location.

2. Increased electronic capability to manage records and enhance emergency communication.
3. Increased staffing to address the crime rate and the increase in traffic.
4. Greater community participation in problem solving to reduce crime and its consequences.

6.6 Fire

Prior to 1973, the fire department for the Village of Essex Junction handled all calls for the Village and Town. Then in 1973 the Town of Essex Fire Department was established. This department has 24 volunteer firefighters and three dispatchers under the direction of a chief who is appointed by the Town Manager. Its fire station is on Sand Hill Road in Essex Center, adjacent to the Town Public Works Garage.

The Town Fire Department has developed mutual aid relationships with neighboring communities including Essex Junction, Westford, and Williston Fire Departments. The four departments continue to train together, participate in joint purchases, share common dispatch and radio frequencies and support each other's communities in an automatic mutual aid system and specialized response teams.

The fire station for the Town outside the Village was built in 1973 with additions in 1977 and 2002. It has a gross floor area of over 7,100 square feet (versus the original 2,850 square feet in 1973). The garage space is currently at maximum capacity with six vehicles and one trailer presently stored in three drive-through double bays. The addition in 2002 added not only one double garage bay, but also a large classroom that has become the Town's Emergency Operations Center during major incidents. The classroom is open to community events including scout meetings, hunter education classes, and a variety of programs through the Recreation Department.

From July 1, 2008 through June 30, 2009, the Essex Fire Department responded to 797 calls (including 290 medical responses, 118 car accidents, and 122 fire alarms).

The Essex Fire Department averages about 800 calls for service each year, which includes medical first response to ambulance calls in the Town of Essex and parts of Westford. The fire department has a close working relationship with Essex Rescue that includes training and equipment supply.

The Essex Fire Department assists residents with fire prevention information, programs and intervention. Continuing efforts include two open house events for the public each year, National Fire Prevention Week where they go into the schools and daycares teaching about fire safety, and the Juvenile Fire Setter Program.

In 2009, the Department began the Bureau of Life Safety whereby three members accompany the state Fire Marshal in conducting building inspection and assist with plan reviews within the Town. The focus of this program is on education and safety, and not punitive.

Staffing remains a constant need, especially during the weekdays when nearly all members are regularly employed. With the growing Fire Department responsibilities and mandated staffing requirements for emergency responses, the Town may have to hire a full-time administrator to oversee the department.

In addition, a greater number of land development permits have been issued for relatively taller buildings. The Town currently relies on the Village and other surrounding communities for an aerial device (i.e. ladder truck or tower truck) for fire protection in order to comply with the National Fire Protection Association (NFPA), International Standards Organization (ISO) and Occupational

Safety and Health Administration (OSHA). An analysis is needed to assess the capital needs and determine whether the Town should adopt building codes in order to maintain life safety in this community.

6.7 Rescue

Essex Rescue, Inc. was organized in 1971 as a professionally trained, volunteer ambulance service. Service is provided by approximately 50 volunteers to individuals requiring emergency medical treatment and transportation from Essex, Westford, Jericho, and Underhill. With a goal of providing emergency services 24 hours a day for 365 days a year, Essex Rescue has hired one full-time and one part-time employee to assist the otherwise all volunteer staff.

Approximately 10 percent of Essex Rescue's operating funds are donated by the towns it serves with the rest coming from fund drives and private donations. A new Subscription Plan allows a family to pay an annual fee to avoid a bill for services.

Essex Rescue, Inc. operates out of a facility near the Essex Community Educational Center. The building is owned by Essex Rescue Inc., with no outstanding notes at this time, and is on leased land with a 99-year lease, which expires in 2070. Recently expanded, the members see no need for a new building for the foreseeable future.

6.8 Essex Free Library

The Essex Free Library is an integral part of historic Essex Center. The original timber Essex Congregational Church was built in 1804 and subsequently, a brick structure was constructed on the foundation following a disastrous fire in 1838. During the early to mid-1900s the building was used by a succession of small church congregations and for other community purposes. As the building continued to structurally deteriorate, it was finally abandoned in 1985. In 1987, Town of Essex voters approved a bond for the restoration of the former Congregational Church located on the Town Common at the corner of VT Routes 15 and 128 as a new home for the Essex Free Library. That relocation was completed in February 1989.

Patron Information:

The Essex Free Library primarily serves the area of Essex outside the Village of Essex Junction, which enjoys the fine services of the Brownell Library. The two libraries complement each other by ensuring that there is a library open in Essex every weekday evening and on Saturdays year-round. Many area residents use both libraries interchangeably depending on the day, item availability and their errand route. Library cards, issued every two years to Town residents, are known as HOMECARDS. These may be used at any of the libraries in Chittenden County, except the Fletcher Free Library in Burlington. As of September 2009, 6,956 Essex residents had updated cards from this library. More than a thousand patrons from Westford, Cambridge, Jericho and Underhill also use the library as they shop in and drive through Essex.

Building Layout:

The Essex Free Library offers service to the community in 6,000 air-conditioned square feet of collection space on three floors, all of which are accessible using either stairs or the grade level elevator at the rear of the building. While books for all ages continue to be the most utilized

collections, an attractive and active collection of DVDs and books on CD are becoming increasingly popular. The three-sided mezzanine houses Science Fiction and Young Adult materials in all formats, Biographies, Paperback Fiction and Graphic Novels. In addition, there are several tables for studying and couches for quiet reading in this lofty area. The Main Floor contains the Non-Fiction and Fiction collections, the Periodical and the AV alcoves. There is a display cabinet for patron collections and themed displays of new and topical books appear regularly on the spacious window sills. The Children's Room, which houses materials in every format for youngsters from birth through grade 5, provides a lively and inviting space on the lower level.

Collection Information:

As of September of 2009, the library housed 35,484 items for use by the public of which nearly 9,000 items are located in the Children's Room. These items circulated 110,231 times in 2009, which indicates 30 to 35 percent are in circulation at any given time. Inter-Library Loan is routinely offered to Essex patrons for titles not available in this collection. During 2009, the library borrowed 264 titles for Essex patrons and loaned 1,970 items to 285 other libraries in Vermont.

Program Information:

A small activity room with space for story-time, special programs, craft classes and meetings adjoins the Children's Room. This space is also available to the public for small meetings anytime the library is open. Programs are offered throughout the school year for toddlers, pre-schoolers and their parents or caregivers. The Summer Reading Program is designed to be a fun and popular way to continue good reading habits throughout the summer months with its variety of special programs and clever incentives. An adult book discussion, which follows a new theme each year, meets monthly at noon. Copies of each title are made available for participants during the month leading up to the discussion. Reading discussion groups throughout the state are supported by this growing collection of multiple copy sets, funded by the Library Board of Trustees. The Main Reading Room is used for larger programs. Each year the library invites a Vermont author to visit either to discuss a book or introduce a new publication. Other programs of local interest for adults are offered throughout the year, especially during "cabin fever" time.

Organization:

The library is staffed by a full-time director who reports to the Town Manager and is overseen by the Library Board of Trustees, which is appointed by the Essex Town Selectboard. The Trustees are committed to the long-term viability of the library and future potential of the facility. The Friends of the Library and the Trustees of the Library host two fund-raisers each year. The proceeds of these events are used to enhance programs and meet un-budgeted expenses when needed. The director manages a staff of three full-time and two part-time persons. Two staff persons are available in the public service areas of the two circulation desks at all times with at least one other person providing collection support

Technology Status:

The library has had an automated circulation system since 1996. The catalog can be accessed on-line and while visiting the library at any one of the five public Online Public Access Catalogs (OPACs). These public workstations are located on all three floors with access to both the internet and word processing and are linked to a networked printer. The library also participates in the Green Mountain Consortium's "Listen Up Vermont," which allows downloading of books and language programs. "Vermont On Line" offers access to newspaper and periodical databases with thousands of full-text articles. A link is provided to all these offerings on the library's web page. The library is

committed to meeting the technology needs of its patrons wherever feasible financially and logistically.

Overall Status:

Despite its relatively small staff and collection, the Essex Free Library continues to offer patrons a welcoming environment and a fresh and active collection. The library's high turnover rate indicates that the collection is well used and well attuned to the many and varied curiosities and expectations of the borrowing community. The entire Essex Community and neighbors from towns nearby are fortunate to have two recently renovated and vibrant libraries located in the primary population centers at the crossroads of the Four Corners and the Five Corners.

6.9 Memorial Hall

Memorial Hall was built as the Town Hall and dedicated in 1871 to the men of Essex who died fighting the Civil War. When the Town government moved to the Village of Essex Junction, Memorial Hall served as a location for indoor basketball games and a variety of other functions, eventually becoming the home of the Essex Community Players. Despite the many interior improvements made to the building by the Essex Community Players, the overall condition of Memorial Hall continued to deteriorate. The building was closed in 1985 due to concerns with its structural integrity. However, in 1986 during the low point in the building's history, it was found eligible for inclusion in the National Register of Historic Places. In the late 1980s the Selectboard appointed a committee to study the building and determine what improvements were needed. As a result of the committee's work, a bond was authorized by the Town's voters to pay for some basic improvements to make the building safe for use.

A more in-depth assessment of Memorial Hall renovation and restoration needs and possible uses was completed in 1995 by the Selectboard-appointed Memorial Hall Study Committee. The Committee concluded that an ongoing Memorial Hall Committee or Oversight Board should be established that would:

- initiate fund-raising activities that would result in the development of a Memorial Hall Fund;
- organize and conduct volunteer work sessions to undertake certain improvements to the building;
- promote the use of Memorial Hall and offer recommendations to the Selectboard regarding scheduling and use.

The committee also recommended that:

- an effort should be made to increase public awareness of the existing problems with Memorial Hall as well as the potential uses for it;
- a consultant should be hired to develop detailed cost estimates regarding building improvements (A space-use study was completed by Black River Design in December, 2003, which outlined why the second and third floor spaces could no longer be used and provided both short and long term solutions for improving the facility. Because of the preliminary cost estimates, no action has been taken to secure funding for the improvements) ;

- the Town should undertake the cost of some of the improvements as part of both the operating and capital budgets.

In addition to structural deficiencies, parking is limited at the site. The Town did, however, provide an additional 13 spaces in 2003 when an adjacent building was torn down, although the lack of adequate parking remains an issue. The building was updated with a new furnace and shed in 2008.

At the current time, Memorial Hall is actively used by the Essex Community Players, the Essex Parks and Recreation Department for pre-school and adult evening classes, and is available for rent by Essex residents and other groups.

6.10 Municipal Office Building

The Town's administrative offices occupy 10,380 square feet in three separate office buildings. The largest building, located at 81 Main Street, provides 8,000 square feet for the Town Manager's office, Parks & Recreation, Community Development, Real Estate Assessment, Finance, Town Clerk, and Police Departments. The Police Department occupies 1,770 square feet leaving 5,450 square feet for the Town's customers and administrative staff members. Meeting space is limited to 575 square feet, resulting in individuals having to stand in hallways during Selectboard, Planning Commission, and Zoning Board of Adjustment meetings when there are more than 20 people in attendance.

Other than the addition of two detached temporary storage sheds, the municipal building has not been expanded since the building was renovated for occupancy by the Town administration and Police Department in 1983. To meet the needs of servicing a growing community without building expansion, the Public Works Department moved to Essex Center in 1989 and the Police detectives moved to 7 Towers Road in 1991 (now renting space in another location).

A short- and long-term plan to address the facilities needs of the Town was presented by the Town of Essex Facilities Needs Committee in 1994. The report concluded that some of the Town's facilities – the 81 Main Street and 7 Towers Road buildings – needed immediate attention while others did not. In response to the report, the Selectboard recommended purchase of land in the Town Center for construction of a new municipal building. However, voters rejected that option in March 1998.

Facing continuing need for improved and expanded office facilities, the Town administration prepared a memorandum in November 2000 outlining upgrade options and a strategic plan. A number of goals were identified:

- Reduce costs and eliminate redundant costs associated with operating and maintaining several satellite offices and buildings.
- Correct deferred building maintenance.
- Consolidate facilities and personnel to improve morale and improve internal communications.
- Create acceptable storage space.
- Add space to improve current operations, efficiencies and productivity in addition to accommodating need for more personnel.
- Improve ADA accessibility.

- Improve access to records and services.
- Provide a comprehensive, long-term solution.

Additional needs identified include lack of meeting space and sufficient parking to accommodate large meetings or the public during tax payment times.

The most recent attempt to solve the space limitation issues at 81 Main Street was a 2004 proposal to build a new 16,000 square foot building on leased land on the southwest corner of Essex Way and VT Route 289 that would have housed the Town Manager's office, Parks and Recreation, Real Estate Assessment, Community Development, Town Clerk, Finance, and Public Works Departments. With renovations the Police Department would have occupied the entirety of 81 Main Street allowing the detectives to move out of space leased by the Town. The voters rejected that proposal in November 2004.

6.11 Public Works Department

The Public Works Department moved to the old Essex Free Library building in 1989 to provide better accessibility to the Public Works Garage located off Sand Hill Road and to free space at 81 Main Street. The office space on the Town Common consists of 700 square feet and provides office space for three employees.

The Public Works Garage off Sand Hill Road is a 10,000 square foot facility which houses the Town's snow plows, heavy equipment, and maintenance equipment. There is an existing need for additional space to house this equipment.

The following are the major changes/improvements to Town buildings from 2006-2010:

Table 6-3 MUNICIPAL OFFICE BUILDING CHANGES/IMPROVEMENTS 2006-2010	
BUILDING	CHANGES/IMPROVEMENTS
81 Main Street	<ol style="list-style-type: none"> 1) Addition of Communications Facility for the Police Department 2) New Secure Control Access Doors (Town and Police) 3) Removal of old asbestos flooring and installation of new floors in entry vestibule 4) Installation of energy efficient lighting throughout the building
Memorial Hall	<ol style="list-style-type: none"> 1) Energy retrofit (building insulation) in cooperation with VT Gas 2) New rear building handicapped entry 3) Construction of storage addition at rear of the building 4) Removal of stored materials from 3rd floor; use of adjacent 7 Towers Road building by Essex Players to replace lost space
Powell Museum	Energy retrofit (building insulation) in cooperation with VT Gas
Fire Station	<ol style="list-style-type: none"> 1) New high efficiency heating furnace with federal energy grant 2) Improved computer connectivity to other departments
Highway garage complex	<ol style="list-style-type: none"> 1) Energy retrofit (building insulation) in cooperation with VT Gas 2) Added storage (doubling capacity of indoor salt storage) 3) Added space for equipment storage (cold storage) 4) Addition of interior meeting room 5) Energy efficient lighting retrofit 6) Metal-frame/cloth cold storage structure for road grader 7) Improved computer connectivity to other departments 8) Improvements to onsite stormwater collection and treatment systems 9) Office upgrade (air quality and space) for Supt. and Mechanic 10) Increased clean office space for water/sewer/recreation employees 11) Addition of covered area for Senior Bus (building overhang extension)
Public Works Offices	<ol style="list-style-type: none"> 1) New roof, windows and siding on north face to eliminate mildew and building rot 2) Installation of energy efficient lighting throughout the building 3) Installation of energy efficient windows
Library	<ol style="list-style-type: none"> 1) Installation of new energy-efficient furnace 2) Installation of new energy efficient lighting
Source: Essex Public Works Department	

6.12 Childcare Facilities

The availability of adequate child care facilities for working parents is widely considered a critical ingredient of a healthy community. Not only is childcare an essential part of a community's social infrastructure, support for such facilities is increasingly considered an important economic development strategy.

Childcare facilities are regulated by the Vermont Department of Social and Rehabilitation Services. Providers operating out of private homes who care for not more than six pre-school children from two or more families, in addition to not more than four school age children for four or fewer hours each day, must be registered with the state.

According to the 2000 U.S. Census, 1,407 Essex residents (Town and Village) are less than five years of age, and 2,101 are between six and 12 years of age. Updated childcare figures were not available at the time of the writing of the 2011 Town Plan. The Census does not provide an estimate of the

number of Essex children whose parents require childcare. As of October 2004, there were 22 licensed facilities (including school-based programs) and 25 registered homes providing care for children in the Town of Essex. These facilities have a combined capacity to serve 780 children with full-day childcare, 47 children in part-day pre-school, and 220 students in afterschool programs operated by the Town school system. Vacancy rates vary from 5 percent to 20 percent depending on the program, with the greatest demand being for infant care.

Other than the use of the afterschool program, the Town is not involved in providing childcare to local residents. No change in this policy is anticipated; although there are several actions that the Town can undertake to encourage the establishment and operation of private facilities in the community and eliminate potential unnecessary regulatory barriers.

6.13 Telecommunications Facilities

Essex is generally well served by modern telecommunications services and facilities. Cellular phone service is available throughout most of Essex through several providers, and broad-band internet access is available through Fairpoint Communications. Comcast provides both cable television and broadband access to properties within the Village and adjacent neighborhoods. Cable service is not available, however, to more rural parts of the community.

No widespread wireless internet access has been developed in the community, although recent discussions have focused on whether such service could be developed in higher density areas, such as the Village and Fort Ethan Allen. Such access – whether through a public or private initiative, could provide economic development opportunities within the service area(s) and should be encouraged.

6.14 Goals, Objectives and Strategies

Goal 6.1: Promote policies for efficient and environmentally sound solid waste disposal.

Objective 6.1.1: Continue to work with the Chittenden Solid Waste District to promote regional solid waste programs.

Strategy 6.1.1.1: Encourage regional efforts to locate solid waste and hazardous waste disposal facilities, whether inside or outside of the county.

Strategy 6.1.1.2: Continue to expand efforts to encourage reuse and recycling.

Objective 6.1.2: At the Town level, promote public education, awareness and participation.

Goal 6.2: Provide adequate public facilities that will support the goals of this plan including compact, land efficient development in designated growth areas.

Objective 6.2.1: Provide for build-out within existing service areas before expanding to other areas.

Strategy 6.2.1.1: Evaluate and implement water and sewer service areas to be consistent with this Town Plan. Prohibit extensions beyond the boundary of the existing sewer core.

Strategy 6.2.1.2: Include within utility service areas those locations where substantial deficiencies exist and other alternatives are not reasonable. Maintain records of reported

subsurface disposal system failures and low well yields to assist in the determination of need.

Objective 6.2.2: Ensure future availability of water, sewer and stormwater systems for Town users.

Strategy 6.2.2.1: Determine available system capacities and pursue allocation policies that will support reasonable growth rates over a number of years.

Strategy 6.2.2.2: Discourage the use of the Town's capacity by other entities for other than short-term use.

Objective 6.2.3: Locate, design and maintain Town utilities, services and facilities in keeping with the character of the Town and in conformance with Town development goals.

Strategy 6.2.3.1: Locate a future Town office building in the Town's designated growth areas to enhance and stimulate business already located there.

Strategy 6.2.3.2: Provide Town services in central locations to facilitate efficient delivery to the area served.

Strategy 6.2.3.3: Locate public safety services away from known hazards including hazardous material transportation routes and areas of excessive traffic congestion.

Goal 6.3: Provide public and private facilities utilizing prudent and reasonable technology in a manner least detrimental to public health and the environment.

Objective 6.3.1: Maintain the existing municipal water and sanitary systems to anticipate and plan for future repairs and replacement.

Strategy 6.3.1.1: Maintain computerized models of water and sanitary systems to anticipate and plan for future repairs and replacement.

Strategy 6.3.1.2: Ensure that new and existing systems are structurally sound and meet the Town's Public Works Specifications.

Objective 6.3.2: Ensure that newly proposed subsurface disposal systems are not detrimental to public health or the environment.

Strategy 6.3.2.1: Require construction of new systems in accordance with state Environmental Protection Rules.

Strategy 6.3.2.2: Provide educational resources for the users of existing subsurface disposal systems.

Objective 6.3.3: Limit construction of new community wastewater disposal systems.

Strategy 6.3.3.1: Require developers and owners of private community systems to provide assurance of the correct installation, maintenance and operation of the system as a requirement of subdivision approval. The Town shall not bear any financial responsibility of liability for the installation, maintenance and operation of private community sewage disposal systems.

Objective 6.3.4: Encourage water conservation methods and technology via the use of water-saving devices, such as low-flow toilets and shower heads, front-loading washing machines, and hygienic grey water systems.

Goal 6.4: Maintain a quality level of service and facilities without creating an undue financial burden on the Town.

Objective 6.4.1: Ensure that users and new development contribute their proportion of costs for infrastructure improvements and maintenance.

Strategy 6.4.1.1: Continue to require that new developers pay the entire cost of new infrastructure to serve their developments.

Strategy 6.4.1.2: Evaluate deficiencies in existing systems that will be made worse by expanded use, and require new developments to pay their fair share of the cost of addressing those deficiencies.

Objective 6.4.2: Promote the efficient expenditure of public funds on infrastructure improvements through continued annual adoption of a capital improvement plan and budget.

Goal 6.5: Assure that adequate telecommunications, wireless and cable television services are maintained and allowed to enhance appropriately within the Town of Essex to satisfy public and private sectors and municipal communication needs.

Objective 6.5.1: Coordinate with the telecommunications, wireless and cable television providers relative to growth trends and municipal-initiated construction projects.

Objective 6.5.2: Support expansion of the telecommunication and wireless network, primarily within public rights-of-way, as necessary to support appropriate growth and upgrading of telecommunication and wireless services.

Objective 6.5.3: Allow expansion of cable television services as public demand dictates.

Objective 6.5.4: Encourage underground utilities where feasible.

Objective 6.5.5: Ensure that the siting of new infrastructure is consistent with an attractive rural environment.

Objective 6.5.6: Learn from the FCC and others about emerging technologies and their cost/benefits to Essex.

Objective 6.5.7: Ensure local regulation adequately promotes, but sufficiently regulates, such facilities.

Objective 6.5.8: Research whether the Town should go “wireless.”

Goal 6.6: Maintain a quality level of police, fire and administrative services.

Objective 6.6.1: Expand services as the Town grows in accordance with demonstrated need based upon its population demand and type of development.

Objective 6.6.2: Ensure adequate facilities (i.e. buildings and equipment) for services to provide those services in the efficient and timely manner expected by residents and others.

Objective 6.6.3: Preserve the safety and security of the citizens.

Objective 6.6.4: Foster the cooperation of the county, state, and adjoining communities in the delivery of public services.

Goal 6.7: Ensure public safety for Essex Town residents and visitors and minimize public liability.

Objective 6.7.1: Minimize the risk of falling limbs and trees in public right-of-way and on Town property.

Strategy 6.7.1.1: Conduct a *Hazard Tree Assessment* to identify trees that pose a risk to public safety and property and to determine what action (pruning or tree removal) is necessary to reduce this risk. The Hazard Tree Assessment can be done in conjunction with a Public Tree Inventory.

Strategy 6.7.1.2: Budget regularly for tree maintenance needs.

Strategy 6.7.1.3: Seek alternative funding for essential tree care. The Urban and Community Forestry Program is an important source of information about available grant money.

Objective 6.7.2: Collaborate with first response agencies (police, fire, rescue, emergency public works operations) to ascertain what community facilities and services are safe from “external” tampering and are planned and coordinated in a fashion that protects the general safety of the public at-large.

Strategy 6.7.2.1: The Essex Safety Committee should meet to develop/update a local emergency management plan related to the Town’s community facilities and services.

Strategy 6.7.2.2: The Essex Safety Committee should encourage the local Emergency Plan Committee to update the Emergency Management Plan.

Strategy 6.7.2.3: Coordinate with other local, regional, and state entities to address pre-disaster planning (e.g., administrative tasks to ensure FEMA funding once a disaster strikes).

Goal 6.8: Carry out a stormwater program with attention to the parameters of fiscal constraint, a northern New England climate, realism, and practicality.

Objective 6.8.1: Develop, implement, and enforce a stormwater management program designed to reduce the discharge of pollutants to the “maximum extent practicable,” protect and preserve water quality, and satisfy the appropriate water quality requirements of the Clean Water Act.

Strategy 6.8.1.1: Update the Town’s 2003 Stormwater Management Plan, as appropriate, and carry-out strategies adopted in that plan.

Strategy 6.8.1.2: Continue to comply with the requirements of the NDPES Phase II Permit, state stormwater initiatives, and other required permits and approvals.

Strategy 6.8.1.3: Continue to participate with the state stormwater collaborative.

Strategy 6.8.1.4: Prevent additional segments of the Town’s waterways from becoming “impaired” and work toward removing the current two designations from the state list of impaired waterways.

Strategy 6.8.1.5: Adopt a stormwater ordinance to address erosion control, illicit discharges, stormwater management plans, and stormwater operations.

Strategy 6.8.1.6: Encourage rain gardens as a way to address stormwater run off.

Goal 6.9: To ensure the availability of safe and affordable childcare and to integrate consideration of childcare issues – including childcare financing, infrastructure, business assistance for childcare providers, and childcare workforce development - into the local planning process.

Objective 6.9.1: Recognize the importance of adequate and affordable childcare services to Essex residents and those who work in Essex.

Strategy 6.9.1.1: Periodically update the assessment of childcare needs and the availability of child care services in Essex¹.

Objective 6.9.2: Enable the provision of childcare services in a variety of settings from small home day-care facilities to larger day-care centers.

Strategy 6.9.2.1: Review the zoning bylaws to ensure that childcare facilities are allowed in all appropriate locations, and to minimize other regulatory obstacles to the provision of childcare services.

Objective 6.9.3: Facilitate the creation, expansion, or continuation of childcare services in appropriate locations in Essex.

Strategy 6.9.3.1: Continue the after-school program for elementary school students.

Strategy 6.9.3.2: Encourage the school district and appropriate childcare providers to explore the state Average Daily Membership (ADM) reimbursement for pre-school services.

Strategy 6.9.3.3: Encourage the Town's larger employers to provide childcare services for their employees.

¹ The most recent assessment was done in October 2004 by Child Care Resources, located in Williston, Vermont.