CHAPTER 11 – WATERSHED HEALTH

Williston lies within the 8,249 square mile Lake Champlain watershed. This watershed includes portions of Vermont, Quebec, and New York. Runoff from the Town eventually finds its way into Lake Champlain by one of several paths, which are shown on Map 14 – Williston Watersheds. Williston's watersheds are summarized below:

- The **Muddy Brook** runs along Williston's western border forming the boundary to South Burlington. This 20.8 square mile watershed includes the **Sucker Brook** tributary and occupies approximately 6,300 acres in Williston. The Muddy Brook watershed includes the retail centers in Taft Corners and Maple Tree Place. The Muddy Brook fails State water quality standards for toxics, nutrients, and temperature for the last seven miles of the tributary.
- The **Allen Brook** originates above Mud Pond and flows northwest to join the Muddy Brook just before the confluence with the Winooski River. The Allen Brook watershed is Williston's largest, encompassing roughly 6,900 acres. This tributary currently fails State water quality standards for stormwater and E. *coli* from the headwaters down to Industrial Avenue.
- Several small tributaries flow directly into the **Winooski**, draining approximately 5,400 acres in total.
- **Lake Iroquois** and the surrounding lands are part of the **LaPlatte River** watershed, ultimately draining into Shelburne Bay. Lake Iroquois drains into Patrick Brook, which joins the LaPlatte River in Hinesburg. This watershed includes about 1,100 acres in Williston.
- Finally, less than one hundred acres each of the **Johnnie Brook** and **Shelburne Pond** watersheds are within the Town.

For more information on the Lake Champlain Basin, visit the Lake Champlain Basin Program website at http://www.lcbp.org/.

Land development has well-documented impacts on the volume, velocity, and quality of surface runoff. Changes in these parameters have a direct impact on the stability of a stream's channel; the health of the aquatic, wetland, and riparian communities associated with the stream; and the land uses along it. These impacts, along with State and Federal mandates, have propelled Williston into a major role in watershed management. This plan element adopts seven objectives to provide a policy basis for the Town's efforts to maintain and restore the health of its watersheds:

11.1 - Stormwater Management – This objective provides a basis in the comprehensive plan for Williston's stormwater management plan.

11.2 - Stream Restoration – The town has completed a major restoration effort on the Sucker Brook, is now involved in a major restoration effort on the Allen Brook, and is working to expand restoration efforts to Muddy Brook.

11.3 - Water Quality Monitoring - The town will continue to gather baseline water quality data for the Allen Brook and work to expand this effort to other streams in Williston.

11.4 - Lake Iroquois – This objective calls for Williston to develop partnerships with other organizations to identify and alleviate problem areas affecting the quality of the lake.

11.5 - Source Water Protection – This objective calls for Williston to work with water suppliers to protect public drinking water sources.

11.6 - Groundwater – The spread of rural residential development has raised questions about the adequacy of groundwater supplies. The town began acquiring better data as a basis for decision-making in 2005.

11.7 – Stewardship - The Town will take an active leadership role in land stewardship efforts.

11.1 Stormwater Management - The Town of Williston will continue to operate as a Municipal Small Separate Stormwater System (MS4) within the framework established by the Clean Water Act, under the General Permit for MS4s issued by the State of Vermont, and the State's stormwater legislation.

11.1.1 Implement the Stormwater Management Plan. Williston updated the Stormwater Management Plan in March 2008. That plan reflects the requirements of General Permit 3-9014 by explaining how the town will implement six minimum control measures: 1) Public Education and Outreach, 2) Public Participation, 3) Illicit Discharge Detection and Elimination, 4) Construction Site Runoff Control, 5) Post Construction Runoff Control, and 6) Pollution Prevention/Good Housekeeping. The Stormwater Management Plan and subsequent annual reports on its implementation can be found on the Town's website. The policies adopted here support Williston's stormwater management efforts.

11.1.2 Continue to Participate in the Regional Stormwater Education Program. The Regional Stormwater Education Program (RSEP) is a collaborative effort of Williston, other Chittenden County municipalities, the Burlington International Airport, the Vermont Agency of Transportation, and the University of Vermont. The Chittenden County Regional Planning Commission coordinates the RSEP, which promotes public awareness of stormwater issues through an annual media campaign and educational programs.

The Regional Stormwater Education Project's web site is www.smartwaterways.org. You may also link to this site from the Town's web page. A good general source of information on the hydrologic impacts of land development and stormwater management is the Center for Watershed Protection www.cwp.org.

11.1.3 Enforce and Strengthen Regulations that Limit the Impact of Land Development on Water Quality. Williston revised and strengthened stormwater and watershed protection regulations in 2009. These regulations strengthened requirements for vegetated buffers between development activity and streams, lakes, and wetlands. They also set performance standards for runoff and erosion control during the construction and occupancy of developments. The Town should continue to monitor and evaluate the effectiveness of these standards and consider utilizing new technologies and stormwater management strategies as they are developed. The Town should continue to modify and develop standards to further minimize impervious cover limitations. Developing and codifying low impact development standards and ranking criteria can strengthen regulations and improve the development review process. The Town should also develop a mechanism to enforce regulations and conditions of approval, such as by withholding the Certificate of Occupancy until compliance is reached.

11.1.4 Do Not Accept Responsibility for Stormwater Management Issues Created by Private Development. The Town will not accept responsibility for bringing existing stormwater works into compliance with State law unless a stormwater utility is designed on a local or regional level to specifically accept this responsibility (see 11.1.5 below). These systems were designed to accommodate runoff from the entire development, including runoff from any roads later accepted by the Town. Maintenance and upgrades will continue to be the responsibility of the owners. Liability for failure to enforce permit conditions should rest with the State.

11.1.5 Consider the Development and Adoption of a Local or Regional Stormwater Utility. South Burlington established Vermont's first stormwater utility in 2001 through a Town sewer ordinance. The local utility took three or four years to establish and about a $500,000 to implement. The Utility was initially paid for via loan and paid back over time by stormwater fees. The program cost about $1.2 million to pay itself back. Williston should explore the possibility of developing a local utility like South Burlington or work with the other MS4 towns to explore the feasibility of a regional utility. It is possible that this process will be guided in the future by State mandates that are generated from the federal Clean Water Act.

11.1.6 Update the Stormwater Management Plan. The Stormwater Management Plan was updated in 2008 to reflect Williston's new watershed health regulations. Given the Town's active role in stream restoration, this update could be made part of an overall watershed health plan that would be appended to this, or the next, comprehensive plan.

11.1.7 Snow Management. The Town should develop a regulation that subjects snow, including plowed snow, stored snow, and snow melt, to the same standards as stormwater. Landscaping plans and stormwater management plans for proposed development projects should continue to illustrate how snow will be managed on-site.

11.1.8 Address Stormwater Issues in Older Developments. Most development in Williston includes a State-permitted stormwater management system. A few older developments, including Williston Hills, Lamplight Acres, Oneida Acres, and Meadow Brook do not. Untreated stormwater from these subdivisions reaches the Allen Brook and accelerated runoff is causing erosion where it crosses steep slopes. To address these issues, in 2008, the town worked with affected landowners, the Winooski Natural Resources Conservation District, the Agency of Natural Resources, and other partners to successfully arrest the erosion of three major gullies in the Williston Hills development. In 2009, Public Works constructed a stormwater pond to detain stormwater runoff from the Meadow Brook development, generating offset credits in the process. The monitoring and maintenance of these sites should remain ongoing as well as efforts to address stormwater runoff problems in the other neighborhoods. Solving these issues through offset should always be explored.

11.1.9 Encourage Residents to Disconnect Roof Runoff. A relatively easy way to reduce the amount of stormwater that reaches our streams is to educate homeowners on the harmful effect of roof runoff. Williston should consider developing a volunteer program to redirect rooftop downspouts in residential developments from pavement to lawn and participate in programs that encourage the installation of rain barrels and rain gardens.

11.2 Stream Restoration - The Town of Williston will continue to monitor the effects of the Sucker Brook restoration project, continue efforts to remove the Allen Brook from Vermont's list of impaired waters, and begin efforts to restore the Muddy Brook.

The Allen Brook and the Muddy Brook both appear on the State 303(d) list of impaired waters. It is therefore Williston's responsibility restore these streams to their attainment levels. A large-scale restoration project was successfully completed along the Sucker Brook in 2008. Large-scale implementation efforts are underway to address stormwater impairment issues in the Allen Brook, and planning efforts have just begun to address the toxics, nutrients, and temperature impairment on the Muddy Brook.

11.2.1 Monitor Ongoing or Completed Restoration Projects. The Sucker Brook – a tributary to the Muddy Brook - changed course as a result of a storm approximately 20 years ago. The Sucker Brook abandoned a 30-foot waterfall to travel over easily-eroded glacial till. This erosion carved a large,

unstable canyon, sending an estimated 30,000 cubic yards of sediment and 40,000 pounds of phosphorus downstream. From 2001 – 2008 the Town successfully stabilized the Sucker Brook and monitoring of the restoration site will remain ongoing.

Data on the Sucker Brook can be found in:

Evan Fitzgerald, Fitzgerald Environmental Associates. *Sucker Brook Phase 1 and 2 Stream Geomorphic Assessment Summary.* October 11, 2007.

11.2.2 Continue Efforts to Restore the Allen Brook with Corridor Protection. The Allen Brook appears on Vermont's 303(d) list for stormwater. The stormwater impairment is due to an overabundance of sediment, which is caused by accelerated surface runoff, flash flooding, and channel erosion associated with the urbanization and increased acreage of impervious surfaces within the watershed. To address this issue, Williston has developed a strategy of acquiring and reforesting portions of the riparian corridor along the Allen Brook and its tributaries. Wide, forested buffers will intercept, detain, and treat sheet flow to the Brook and its tributaries. Tributaries can also overflow into these buffers, attenuating peak flows into the Allen Brook without causing property damage. The Town has already completed one land acquisition and reforestation project on the former 14-acre Senecal property located off North Williston Rd. The Town will continue to expand this corridor protection strategy along additional privately owned and Town owned parcels within the Allen Brook watershed.

Data on the Allen Brook can be found in:

Vermont Department of Environmental Conservation, Water Quality Division. *Biological and Aquatic Life use Attainment Assessment of Allen Brook*. February 11, 2004.

Lori Barg, Kari Dolan, Cully Hession, Chris Cianfrani, and Bob Kort. *Watershed Improvement Plan and Recommendations for a Total Maximum Daily Load (TMDL) for Sediment: Allen Brook, Williston, Vermont*. Vermont Department of Environmental Conservation, Water Quality Division March 30, 2003.

Evan Fitzgerald. *Allen Brook Watershed Departure Analysis and Project Identification Summary.* April 11, 2008

Vermont Department of Environmental Conservation, Water Quality Division. *Total Maximum Daily Load to Address Biological Impairment in Allen Brook (VT08-02), Chittenden County, Vermont.* September 2008.

11.2.3 Explore Other Offset Possibilities Along the Allen Brook. Vermont's stormwater law requires developers to contribute to "offset" projects in order to obtain a permit. This law assumes that on-site stormwater management is approximately 80% effective in protecting water quality. To achieve the State goal of zero net increase in pollution, another 20% must be achieved by contributing to a stormwater management project on an unpermitted site in the same watershed. Williston will solicit developer contributions to the corridor protection project described in 11.2.2 and use the existing Allen Brook Watershed Model to generate the offset calculations.

11.2.4 Begin Efforts to Restore the Muddy Brook. The Muddy Brook also appears on the 303(d) list of impaired waters for toxics, nutrients, and temperature. The Town has just begun efforts to identify

specific problem areas in the watershed, such as the head-cut near Harvest Lane. The Town should initiate dialog with South Burlington to plan for and fund targeted restoration projects.

Data on the Muddy Brook can be found in:

Evan Fitzgerald and Samuel Parker, Fitzgerald Environmental Associates. *Muddy Brook Phase 1 and 2 Stream Geomorphic Assessment Summary.* February 2, 2009.

11.3 Water Quality Monitoring – The Town of Williston will continue to monitor the water quality of Williston's streams and use the data to inform mitigation efforts.

In 2007, the Planning Office was awarded a Vermont DEC LaRosa Partnership grant for the first time to begin baseline water quality monitoring along the Allen Brook. The monitoring parameters originally included nitrogen, phosphorous, and E. *coli*. Chloride and turbidity were added to this list in 2010.

11.3.1 Continue to Collect and Process Data. Water quality monitoring data currently exists for 2007, 2008, and 2010 (the LaRosa grant program was not available in 2009) for eleven sites along the Allen Brook. The Town will continue to collect data along the Allen Brook and should consider expanding the monitoring effort to include the Muddy Brook. These data will provide a valuable benchmark as restoration projects are completed and development pressure continues to increase in these impaired watersheds.

11.3.2 Analyze Existing Monitoring Data to Prioritize Implementation Efforts. The town should utilize assistance from University students and other partners to analyze the existing water quality monitoring data. The data analysis should identify specific problem areas, recommend remediation strategies, and fine-tune the location of the collection sites to optimize the sampling effort to the goals of the monitoring program.

11.3.3 Explore Technologies and Methods Available to Identify Sources of E. coli along the Allen Brook. Based on three years of monitoring data, the levels of E. *coli* in the Allen Brook have failed to meet both State and Federal standards at all eleven sampling sites. The Town should begin to explore technologies and methods available to identify sources of E. *coli* to allow the Town to target and mitigate these pollution sources prior to the release of the Total Maximum Daily Load (TMDL) guidance for the Brook.

11.4 Lake Iroquois – The Town will participate in partnerships to improve the Lake Iroquois ecosystem.

The Vermont Agency of Natural Resources has classified Lake Iroquois as eutrophic, meaning that the Lake's waters are rich in nutrients (i.e. phosphorous, nitrogen) that promote the proliferation of plant life, especially algae, which in turn reduces the dissolved oxygen content that fish and other aquatic species rely on for survival. Furthermore, the elevated nutrient levels in the Lake have contributed to the spread of the invasive aquatic plant, Eurasian Watermilfoil (*Myriophyllum spicatum*). Studies done on the Lake by lay monitors (volunteers) and by the State since 1979 indicate that Lake Iroquois has one of the highest average levels of phosphorus of all the lakes in the State. In a survey conducted during the summer of 2010 by volunteers of the Lake Iroquois Association and staff of the State Department of Environmental Conservation, ten areas of concern were identified along the lakeshore as potential input points for nutrients and stormwater.

A second concern is pollution. The Public Works Department monitors E. *coli* at the designated swimming area at the northern end of the lake and results to-date have been below the State and federal limits; however lakeside residents are concerned that the aging septic systems surrounding the lake will lead to E. *coli* and nutrient problems in the future. The expense of new alternative septic systems on shoreland property, particularly for seasonal residents, is exorbitant. Incentives and assistance should be considered to promote acceptable solutions.

11.4.1 Support the Efforts of the Lake Iroquois Association. While the Lake Iroquois Recreation District (LIRD) primarily manages the recreational uses surrounding the lake, the Lake Iroquois Association (LIA) has become the advocate for habitat rehabilitation and water quality improvement. The LIA is a 501(c)(3) non-profit corporation whose sole purpose is to maintain and enhance the Lake Iroquois ecosystem. The LIA aims to encourage and guide appropriate public uses of the lake and its watershed for the purpose of protecting and preserving the lake's overall well being. These goals are achieved through monitoring, preventive and management initiatives, research, education, advocacy and other actions, involving the cooperative efforts of property owners, Town, State and Federal officials, and other interested parties. The LIA is a non-regulatory group with a vested interest in the lake's health. The Town should support the efforts of the LIA in any way possible, through direct funding and in-kind contributions, to help them achieve their mission to restore the lake.

What is the Lake Iroquois Recreation District? The 157-acres that make-up the northern portion of Lake Iroquois is not owned by the Town but is rather owned and operated by the Lake Iroquois Recreation District (LIRD). The LIRD is a Union Municipal District made up of 4 Towns: Richmond, Williston, Hinesburg and St. George. Each community appoints a representative to serve on the Board of Commissioners for varied terms. The District primarily manages seasonal permits for recreational use (non-motorized boating, swimming, parking, etc). The Board usually meets once per month and the Williston's Director of Public Works serves as the staff person for the Board.

11.4.2 Develop a Lake Iroquois District Overlay to Protect Water Quality. Lake Iroquois is surrounded by over 90 camps. Most of the camps are seasonal but a few have been converted to year-round residences. Many of the existing camps along the lake do not conform to Williston's current regulations, which state that all development must occur outside of the 150-foot watershed protection buffer, with the exception of underground utilities. Policy 3.7.2 of this plan calls for the Town to develop an overlay district to address these issues. The Town should also establish a cooperative link with the other three towns within the lake's watershed to consider establishing plans, objectives and actions that complement each other.

11.5 Source Water Protection - The Town of Williston will help protect both water quality and quantity in drinking water Source Protection Areas by referring development proposals to any applicable water suppliers.

Williston residents and businesses receive their drinking water from one of three sources: a private well, which is managed by the landowner; the Lake Iroquois Source Protection Area, which is supplied by the Champlain Water District (CWD); or the Porterwood Source Protection Area, which is supplied by the Williston Fire District #1 (FD1). Williston's two Source Protection Areas (SPAs) are shown on Map 14. Water suppliers who manage SPAs are responsible for developing and updating Source Protection Plans (SPPs), which are designed to maintain the integrity of the SPA. This section of the plan calls for Williston to ensure that all development activities within the designated SPAs are consistent with the SPPs; therefore development proposals within SPAs will be referred to their water suppliers for comment prior to the issuance of a permit.

11.5.1 Refer Development Proposals Within the Lake Iroquois Source Protection Area to the Champlain Water District. Since 1995, the Champlain Water District (CWD) has implemented a Source Protection Plan (SPP) to protect the Source Protection Area (SPA) for Lake Champlain's Shelburne Bay, which provides drinking water to approximately 68,000 people in Chittenden County, including parts of Williston. The SPA includes Shelburne Bay and the LaPlatte River watershed, which feeds the bay. Since Lake Iroquois is located at the headwaters of the LaPlatte River, this waterbody is included in the SPA and therefore development in and around the lake falls within the purview of the CWD.

As stated in the SPP, the town will forward any significant development projects, such as those that disturb one acre or greater within the Lake Iroquois watershed and especially those within the lake's 200-foot buffer, to the CWD for comment prior to issuing any permits. However, as stated in Chapter 29 of Williston's *Unified Development Bylaw,* CWD review may be sought at the discretion of the planning Administrator regardless of project size.

To learn more about the LaPlatte Watershed as a source water area see: Highland Geographic, Inc. *Shelburne Bay Subwatersheds Source Assessment Delineation Mapping: Summary Report*. Champlain Water District. 2004. The Champlain Water District's web site is http://www.cwd-h2o.org/. To learn more about groundwater supply issues in the Oak Knoll area see: Balascio, Nicholas. *Letter to Neil Boyden, Williston Public Works Director*. July 10, 2005.

11.5.2 Refer Development Proposals Within the Porterwood Source Protection Area to Williston Fire District #1. Williston Fire District #1 (FD1) supplies drinking water to the Porterwood neighborhood, which serves over 70 homes. FD1 protects and maintains the water quality and quantity of the Porterwood Source Protection Area (SPA) by implementing a Source Protection Plan (SPP) and updating that Plan every three years.

The Town will forward development projects within the Porterwood SPA to FD1 for comment prior to issuing any permits. The Town should coordinate with FD1 to better define what type of development projects are appropriate or exempt from FD1 review.

11.5.3 Identify and Develop Strategies to Limit Potentially Harmful Land Uses and Activities in Source Protection Areas. Developing and adhering to sound protection and preservation strategies for SPAs is critical to ensuring the quality of drinking water available to Williston residents. The Town should define potential sources of contamination (PSOCs) in each SPA and consider developing Special District Overlays for both the Williston Fire District #1 (Porterwood) and Champlain Water District (Lake Iroquois) SPAs that limit the impact of those potentially harmful land uses and activities. This policy expands upon the objectives of 10.4.2.

11.5.4 Utilize and Monitor Best Management Practices to Protect All Source Protection Areas in Williston. The Town should create a detailed inventory of existing uses within and adjacent to all SPAs that can complement the current source protection plans and risk management plans. Those existing uses that are identified as potentially harmful to source water quality or quantity (see 11.5.3 above) should be monitored, managed, or remediated using best management practices.

11.6 Groundwater – The Town of Williston will strive to ensure that development does not result in groundwater supply deficiencies, or in groundwater contamination.

All homes in rural Williston rely on individual wells for domestic water. As the number of rural residences has grown, there have been problems with inadequate groundwater supplies, particularly in the

Oak Knoll area. The Town and property owners have discussed the extension of water service to that neighborhood, but a recent report concluded that the number of inadequate wells does not justify the expense. In addition to water quantity, water quality can also be an issue for some Williston residents who rely on individual wells. Naturally occurring arsenic and uranium, for example, have been detected in in domestic wells along South Road. The Town is working with the Vermont Geological Survey to learn more about the hydrogeology of areas where rural residential development is anticipated.

11.6.1 Continue Hydrogeologic Studies. The Vermont Geological Survey (VGS) conducted a basic hydrogeologic study of selected areas in 2005. The results include the well-yield data shown on Map 15 - Hydrogeology and cross-sections showing the depth and yield of wells in relation to the depth of surficial materials and known geologic features. The VGS also completed an in-depth study of groundwater resources throughout the entire town in 2008. A poster presentation titled *Groundwater Resources in the Town of Williston, Northeast Vermont* contains valuable information regarding bedrock and surficial geology, well yield and depth information, and an evaluation of bedrock aquifer recharge potential. Williston will continue to work with VGS to make effective use of this information.

11.6.2 Develop and Adopt a Protocol for Measuring Adequate Water Supply. The Town requires developers to present evidence that an adequate water supply will be available for lots they propose to develop. This evidence usually consists of logs from existing wells and anecdotal information about the performance of nearby wells. In some cases however, this information is not enough, especially for property owners who abut proposed development projects in areas that are identified as low yield (see 11.6.1 above). The Town should use the extensive data compiled by the VGS to help provide sound information regarding specific instances of proposed development. The Town should also work with the Water Supply Division of the Vermont Department of Environmental Conservation to develop and adopt a protocol for measuring adequate water supply where nearby well-log data and VGS research indicate historical low yields. A protocol for benchmark testing of existing wells should also be developed as a tool for monitoring water quantity impacts before and after development.

11.6.3 Limit Development Where Groundwater Supply May be Inadequate. Vermont State statute Title 10 Chapter 48 indicates that the groundwater resources of the State are held in trust for the public and that all persons have a right to the beneficial use and enjoyment of groundwater free from unreasonable interference by other persons. The statute also states that any person may maintain an action for equitable relief to recover damages for the unreasonable harm caused by another person withdrawing, diverting or altering the character or quality of groundwater. However, the Town is not legally responsible for guaranteeing that a new development will not draw down the groundwater water supply utilized by an existing development. Where data submitted with development proposals does not meet the Town's adequate water supply protocol (see Policy 11.6.2 above), benchmark pumping tests may be required.

11.6.4 Limit Development Where Groundwater Contamination May Occur. In areas where development may occur on rapidly permeable soils, the potential for groundwater contamination from on-site sewage disposal systems, stormwater infiltration galleries, or other sources increases. The approximate extent of rapidly permeable soils is shown on Map 15 – Hydrogeology. The 2005 study by the VGS indicates that the hazard of groundwater contamination in these areas is reduced by a layer of compacted glacial till that underlies the rapidly permeable soils; however, the Town should develop mitigation or protection plans for those areas identified as high risk.

11.7 Stewardship – While State and Federal government entities are ultimately responsible for protecting our local waterways, the Town of Williston will strive to keep those waterways free and clear of contamination.

Quality of life is linked to a healthy environment. In recognizing this mainstay, the Town will strive to become a sustainable community of citizens and businesses motivated to conserve and enhance natural resources through policies, programs, and outreach activities. The Town's stewardship objective is intended to create long-term environmental benefits and to conserve natural resources.

11.7.1 Develop and Adopt a Protocol for Addressing Potentially Hazardous Land Use Activities. The goal of this policy is to address potentially hazardous land use activities that are currently exempted from the Town's zoning regulations. Where an existing land use contributes to watershed contamination and poses a potential risk, or potential of becoming a public nuisance, the Town should develop a strategy to identify that risk and encourage the landowner or operator to develop, implement, and monitor best management practices to assure good stewardship and reduce risk of contamination.

11.7.2 Develop Appropriate Land Use Regulations Where Contamination is Present. The Commerce Street plume is a documented Superfund site where groundwater has been contaminated with volatile organic compounds (VOCs) including tetrachloroethylene (or perchloroethylene, PCE) and trichloroethylene (TCE). Cadmium and chromium have also been detected in the groundwater plume. The Town should continue to work with the Environmental Protection Agency (EPA) to understand the evolution of the plume, and in this case or others where significant contamination is present, the Town should consider land use regulations that address the existing conditions to provide flexibility in determining appropriate uses for these parcels. In the case of the Commerce Street Plume, this is addressed by land use Policy 3.7.3.

11.7.3 Provide Incentives and Increase Education for Water Conservation. The Town should take a proactive role in demonstrating to homeowners, the business community, and developers that water conservation strategies can save money and protect this limited resource. This could be achieved by developing a means to incentivize and enforce the use of water saving technologies in development and redevelopment projects. Since Williston does not have a building or plumbing code, compliance to an incentives program would likely best be measured prior to the issuance of a Certificate of Compliance. The Town should also develop education and outreach materials that address water conservation and provide them to the public in hard copy or on the Town website.

11.7.4 Continue to Omit Wetlands, Rivers, and Buffers from Density Calculations. In 2008, the Conservation Commission, Planning Commission, and Selectboard supported and adopted a policy to omit wetlands, rivers, and watershed protection buffers from density calculations for new development projects. As a result, developable landscapes are no longer subject to proposals that inherently overburden the landscape's natural capacity to overcome stormwater and pollution loading. This practice is a true demonstration of stewardship and should continue to guide development projects in Williston.

11.7.5 Adjust Buffer Requirements According to Land Use Activities. The Town should consider expanding watershed protection buffers to protect wetlands and streams from high risk non-residential land uses, such as petroleum and chemical storage facilities, fueling stations, slaughter houses, etc. Steep slopes and soil types should also be considered when buffer modifications are proposed. The Town's *Unified Development Bylaw* should be amended to identify where expanded wetland buffers may be appropriate.

11.7.6 Discourage the Use of Phosphorous Fertilizer. Phosphorous pollution is the number one threat to the health and stability of Lake Champlain. The primary sources of phosphorous are from fecal matter, fertilizers and soil erosion. For many years now the Town has committed to using phosphorous-free fertilizers on Town-owned land in an effort to minimize the amount of phosphorous that enters our waterways. In 2010, the State of New York banned the use of phosphorous fertilizer entirely. The Town should at minimum expand upon this stewardship role and develop an educational program that deters the indiscriminant use of phosphorous fertilizers and educates homeowners on alternative lawn and yard care practices.