

SECTION I. NATURAL RESOURCES

As part of the Comprehensive Planning process, communities should make decisions that consider the preservation, maintenance, and responsible uses of natural resources. The Town of LaFayette has historically placed a high value on its rural appearance and natural resources. Below is a review of the important natural resources of the Town that exist today.

LAND RESOURCES

The Town of LaFayette includes 39.25 square miles of land area, with .35 square miles of surface water.

Slope and Topography - Slope and topography describe the shape and relief of the land. Topography describes the elevation and changes in elevation, while slope is a measurement of the percentage of change in elevation over a particular distance. LaFayette is located in the Allegheny Uplands, an area formed by glacial processes which resulted in steep hills, deep valleys, and lowland areas shaped by the Town's two major stream systems, Butternut Creek and Onondaga Creek. Elevations range between 540 - 1,500 feet above sea level. Hills and valleys in the Town run generally north and south, with the highest elevations and steepest slopes along a ridge in the east side of the Town and another ridge at the Town's western border. Mason Hill in the east, at just over 1,500 feet, is the highest peak in the town, while the Tully Valley Floor (see Map ____ at the end of the Section) is the lowest elevation.



LaFayette's topography of fertile valleys and steep slopes provide the Town's bucolic sense of place that residents cherish.

Soils - Soil characteristics affect a variety of human activities, from land use patterns, to transportation routes, to the installation of necessary community infrastructure. Soils in LaFayette are the result of ice-age glacial movements, which removed surface materials and redeposited them in an uneven pattern of soil and rock. The higher elevations tend to have stony, poorly drained soil that is not well-suited for cultivation or construction. By contrast, the valleys contain rich soils and extensive deposits of sand and gravel. More information regarding agricultural soils can be found in Section III, Agriculture.

Unique Natural Areas (UNAs) and Critical Environmental Areas (CEAs) - Unique Natural Areas (UNAs) are locally designated sites that are recognized because



of the outstanding qualities that render them unique and deserving of preservation in a natural state. UNAs include natural features such as woods, swamps, glens, cliffs, gorges, and streams that occur in a natural setting or in an urban greenspace. Often, the characteristics that make a site unique are extremely vulnerable to a wide range of both direct and indirect impacts and may be compromised by disturbing the site. UNA's are generally closed to the public.

Under the New York State Environmental Quality Review Act (SEQRA), local agencies may designate specific geographic areas within their boundaries as Critical Environmental Areas (CEAs). To be designated as a CEA, an area must have an exceptional or unique character with respect to one or more of the following: a benefit or threat to human health; a natural setting, e.g., fish and wildlife habitat, forest and vegetation, open space and areas of important aesthetic or scenic quality; agricultural, social, cultural, historic, archaeological, recreational, or educational values; or an inherent ecological, geological, or hydrological sensitivity to change that may be adversely affected by any change. The designation of a CEA provides some regulatory protection for a site and functions as an indicator for developers, local officials, and other governmental agencies that the site is of significant environmental value. The designation of UNA's or CEA's can be a valuable tool to a community that is concerned about preserving sensitive environmental areas.

Currently the Town of LaFayette has not designated any sites within the Town as a UNA or CEA. They can, however, be important tools that can assist the community in ensuring that its most important and sensitive environmental assets are preserved.

Rare Plants and Animals - The New York State Heritage Program is a partnership between the NYS Department of Environmental Conservation (DEC) and the Nature Conservancy. The purpose of the program is to facilitate conservation of rare animals, rare plants, and natural ecosystems, thereby maintaining the biodiversity of New York State.

Information regarding the presence of rare or endangered plants and animals in a particular municipality can be accessed via a State maintained website. The web address is <http://www.dec.ny.gov/natureexplorer/app/>. There is a disclaimer on the website that notes that rare and endangered species located in other towns in Onondaga County may not be listed for the Town of LaFayette. The list below only includes records of rare species and significant natural communities from the databases of the NY Natural Heritage Program. It is not a definitive statement about the presence or absence of all plants and animals, including rare or state-listed species, or of all significant natural communities. For most areas, comprehensive field surveys have not been conducted, and this list should not be considered a substitute for on-site surveys. It should be noted that no endangered animals were reported for the Town. There are no State regulated wildlife management areas within the Town.



LAFAYETTE ENDANGERED AND THREATENED PLANTS AND MOSSES			
PLANT	SUBGROUP	DISTRIBUTION STATUS	YEAR LAST DOCUMENTED
Burrhead	Other flowering plants	Possible but not confirmed	1916
Lindsey's Aster	Asters, goldenrods, and daisies	Possible but not confirmed	1912
Schweinitz's Sedge	Sedges	Recently confirmed	2005
Yellow Giant-hyssop	Other flowering plants	Historically confirmed	1903
Starke's small pottia moss	Other mosses	Recently confirmed	2005

WATER RESOURCES

Water resources are critical to the public health, environmental, and economic well-being of a community. Economic and environmental activities dependent on the integrity of local water bodies and water supplies include tourism, recreation, education, agriculture, industry, and real estate. In the Town of LaFayette, there are significant surface water and groundwater resources that merit attention. The Town's 1988 *Land Use Plan* includes detailed information regarding water resources, and is referenced extensively below. Map ____ at the end of this Section, depicts rivers, streams, wetlands, and flood zones, in the Town.

Groundwater - Groundwater is any water that is located under the surface of the ground including underground streams and aquifers. The water table is how deep you would have to dig to reach soil that is saturated with water.

Groundwater is the overwhelming source of drinking water for housing units in the Town. Over 80% of households have drilled or dug wells, not including homes in Cardiff that were served by spring water furnished by the Allied Corporation.

With such a heavy dependency on groundwater supplies, the issue of finding adequate groundwater supplies and protecting these supplies from depletion or contamination are vital to the Town. The Town needs to conserve and protect its existing groundwater supplies and evaluate new development proposals in light of their impact on these supplies. Information concerning groundwater is not available in detailed form for the Town, although studies have been completed regarding water availability for development of municipal water in the Town. The collection of such data Town-wide would require expensive ground surveying techniques and test borings. However certain generalized information is available which does provide indications of potential problem areas relating to groundwater.



The availability of groundwater in the Town is shown on Map ____ . The majority of the Town is defined by till soils where water yields are in a rather low range, generally under two gallons per minute, The Onondaga Creek Valley is an area of moderately high water yield where sand and gravel is located beneath less permeable materials; however, it is also an area where unconsolidated deposits may yield salty ground water. A freshwater zone from between 10 feet to more than 100 feet thick occurs above the salt water. This accounts for the fact that some good wells are located in this area whereas others yield salty, brine-like water. The Butternut Creek Valley is also an area of high ground water yields (above 50 gallons per minute), although in some mixed deposits areas the yields can be quite variable. One small area around "Big Bend" on Route 20 and areas north of the Hamlet have yields in the 5-50 gallon per minute range, which is also rather high. It is important to note that this is a highly generalized map and the water yields are estimated based on the saturated thickness and estimated permeability of water-bearing material; therefore, yields at any particular well site could be higher or lower.

The location of some of the major public and semi-public wells and water sources in the Town of LaFayette are shown on Map ____ . The availability of wells that can serve multiple users or high volume users, such as the schools, indicates the variability of water yields in a Town where much of the water is derived from underlying shale deposits. At rock fracture lines or intersections of fractures, yields can be significant; in other places, well yields can be inadequate.

Several water sources (mainly springs) in Cardiff are necessitated by the salt water layer in the Tully Valley or by brine contamination from either former brine wells or brine pipeline. These water sources along the hillsides above Cardiff provide water through pipelines to residences in the Tully Valley. See Section IX, Infrastructure for more information regarding this system.

Groundwater can become contaminated from many sources such as rain and snowmelt runoff, which can carry a multitude of contaminants that enter the aquifer through direct recharge or surface runoff. Manmade pollutants such as oil and grease from cars, or degreasers, salts, and agricultural pollutants such as animal excrement, pesticides, and fertilizers enter the ground water directly and indirectly from surface runoff. An accidental spill from a vehicle traveling on Interstate 81, or other highways in the area, poses a significant threat, as do other spills in the Town. The production and storage of chemicals, including home heating oil, can lead to spills or leakage at industrial, commercial, and even residential sites and pose a major risk of contamination. The hamlet of Cardiff has already experienced ground water contamination for salt extraction and transportation industries. The Town also has some steep slopes that could contribute significantly to pollution of the ground water or aquifer if heavily developed.

Protection of the Town's groundwater resources must be an important priority for the Town, particularly in light of previous salt contamination of ground sources in Cardiff, and the potential for natural gas wells, which are more detailed below. Because aquifer systems are often interconnected and crosses municipal boundaries, the Town should



coordinate with the County and neighboring municipalities to ensure protection of its valuable ground and surface water resources.

Surface Water: Water Bodies - Surface water is any water that is exposed to the atmosphere. Major and tributary surface waters in the Town are depicted on Map _____. There are two major watersheds in LaFayette: Onondaga Creek, with five tributary watersheds, and Butternut Creek with six tributary watersheds. Butternut Creek is dammed at the north boundary of the Town to create the Jamesville Reservoir. Watershed boundaries define drainage areas that are separated by topographic divides or features on the landscape that confine drainage to particular basins. Watershed boundary maps are helpful in evaluating runoff and stream flow characteristics with respect to their impact on roads, culverts, storm sewers, and related facilities. Watershed boundary maps help indicate downstream areas that may be impacted by any new development and can assist in planning mitigating measures for runoff from a site. Furthermore, watershed boundary maps are helpful for water quality studies in investigating the movement of pollutants discharged to surface waters. When used in conjunction with stream gage and runoff data, the drainage area maps can provide information on the capacity of receiving waters to dilute sewage effluents.

The New York State Department of Environmental Conservation's (NYSDEC) classification of the primary streams is based on water quality standards and is used to regulate discharges into surface water. Under the NYSDEC system, surface water discharges must be treated so as not to degrade the water quality of a receiving body below the standards set for that body of water. However, the classification given to a particular body of water does not necessarily indicate its actual water quality condition, which may be higher or lower than the standard. The original classification of surface waters by the New York State Health Department classified waters according to their "highest and best use" rather than by their actual condition. This classification program is now administered by NYSDEC, which updates it at periodic intervals.

The NYSDEC classification system is as follows: Class A and AA - suitable for public drinking water and use in food processing; Class B - suitable for swimming and other water related recreation where bodily contact is involved; Class C - suitable for fishing and recreational boating; Class D - poorest quality used only for agricultural irrigation or most industrial processes. Additional classification letters (T) or (TS) may be assigned to Class A, B or C waters to indicate that there is sufficient dissolved oxygen to support trout (T) or trout spawning (TS).

All surface waters classified AA, A, B and C(T) or C(TS) are protected by State law. A "stream bed or bank disturbance" permit is required before the course, channel, or bed of a protected stream may be changed by dock or dam building, placing a culvert, or by dredging or filling operations. This stream protection permit program is administered by NYSDEC; in addition all projects or actions which will physically alter a protected stream are subject to the provisions of the State Environmental Quality Review Act (SEQRA).

Onondaga Creek is classified as C(T) in the Town and its tributaries are either C(T) or D. Butternut Creek is also classified C(T) with its tributaries either C(TS), C(T), or D. Jamesville reservoir is classified AA as is the reservoir immediately south of Coye Road.



Many of the streams and reservoirs in the Town are protected by the permit procedure of NYSDEC as well as protected from water discharges that would degrade the water quality of the receiving body. While Class D waters are not protected through the State permit procedure, these streams can be important since pollutants or discharges into these streams can eventually flow into higher classification streams and water bodies; therefore the Town should be protective of the water quality of even these streams to avoid problems elsewhere in the watershed. Furthermore, even intermittent streams can become significant water carriers during spring runoff or heavy rainfall periods; these intermittent streams need to be protected both from pollution and from unplanned alteration in their streambeds which can negatively impact downstream areas during heavy rainfall or runoff periods.

In addition to their environmental importance, surface water can also provide recreational opportunities. As detailed in Section __, Parks and Recreation, public fishing is available along portions of Butternut Creek. The Jamesville Reservoir provides opportunities for fishing, swimming, and boating.

Surface Water: Wetlands - Wetlands are a type of surface water. More specifically, wetlands are areas that contain soils that are saturated by ground water or surface water and support wetland plants. Wetlands provide a multitude of ecological, economic, and social benefits. They provide habitat for fish, wildlife, and a variety of plants. Wetlands absorb, store, and slow down the movement of rain and snow-melt, minimizing flooding and erosion, and stabilizing water flow. Wetlands recharge ground water and act as a filter that cleanses surface runoff containing manmade contaminants. Wetlands recycle nutrients, which then contribute to the foodchain and local biodiversity. Wetlands also provide areas for recreation, wildlife viewing, and educational opportunities for humans and are critical to the health of other ecosystems.

National Wetland Inventory - The National Wetland Inventory (NWI) program was established in the 1970's to inventory the nation's wetlands and report on their status. The program produces wetlands maps, which are periodically updated, as well as evaluating and reporting on changes in wetland status in response to natural processes and to human development. NWI designated wetlands do not carry restrictions as a result of such designation except to the extent they may be regulated by the U.S. Army Corps of Engineers which is determined on a case-by-case basis.

Freshwater Wetlands Act - DEC regulated wetlands are governed by the Freshwater Wetlands Act (FWA), Article 24, of the Environmental Conservation Law. Wetlands greater than 12.4 acres, or smaller wetlands that are considered of unusual local importance, are regulated under the FWA. Additionally, around every wetland is an "adjacent area" of 100 feet that is also protected to provide a buffer for the wetland. The main provisions of the FWA seek to regulate those uses that would have an adverse impact on wetlands, such as filling or draining. A permit is required when conducting certain activities within DEC regulated wetlands.

There are number delineated wetlands in the Town as shown on Map ___ at the end of this Section. Most are adjacent or near to the two major Town waterways, on Onondaga Creek and Butternut Creek. There are also some wetlands near the I-81



Corridor that were created when the highway was constructed in the 1960's, blocking traditional drainage areas. Some of these are located or adjacent to potential development sites in the Hamlet. The protection of wetlands falls under a number of jurisdictions, such as the DEC. The Town must fulfill its role by ensuring that impacts on wetland from development is carefully considered as part of the planning review process for any projects.

Flood Zones - Flood hazard areas are typically defined as the 100-year floodplain: the area where each year there is a 1 in 100 (1%) chance that the land will be flooded. This criterion was established in 1968 through the enactment of the National Flood Insurance Act, which instituted the National Flood Insurance Program to reduce flood damages, promote wiser use of floodplains, and ensure that property owners have access to affordable flood insurance. The Flood Disaster Protection Act of 1973 made it mandatory for a community to regulate new floodplain development in order to remain eligible for the subsidized insurance rates. Flood hazard areas also includes "floodways". According to FEMA, a "Regulatory Floodway" means "the channel of a river or other watercourse and the adjacent land areas that must be reserved (from obstructions such as development) in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height." Development in floodways must be regulated by local jurisdictions to ensure that there are no increases in upstream flood elevations. Development within the Town is prohibited in floodways except where the developer can demonstrate that the proposed development would not impede the flow of floodwaters.

The two primary flood hazard areas in the Town are along Butternut Creek and Onondaga Creek. In addition, several areas along Kennedy Creek (a tributary of Onondaga Creek) also are designated as flood hazard areas. The location of these areas is important so that development can be managed and/or restricted in flood hazard areas and potential future financial losses from flooding can be avoided. Flood prone areas are undesirable for residential purposes since septic tanks can be breached during floods, wells can be contaminated, and lives and personal property can be endangered. The Town must be aware of the impact of development, both in and out of flood zones, may have on flooding, including projects discharging runoff into flood areas. Mitigating measures may be necessary to prevent additional runoff from new developments from increasing flood frequency and severity. 2011 saw parts of the Central New York and the Southern Tier inundated with historic and devastating flooding. Climate scientists predict that such events are likely to occur more frequently in the future, and the Town should be prepared. The location of flood hazard areas in the Town are shown on Map ___ at the end of this Section.

LaFayette approved a Flood Damage Prevention Local Law in 1984 and is, therefore, a participant in the National Flood Insurance Program. The Town also has a Flood Plain District in its zoning ordinance that regulates development in such areas. The Town must remain diligent in ensuring that its regulations and strategies related to flood hazards are sufficient to meet changing conditions.



NATURAL GAS

Natural gas consists primarily of methane and is typically found associated with other fossil fuels, in coal beds, as methane clathrates, and is created by methanogenic organisms in marshes bogs, and landfills. Natural gas is often described as the cleanest fossil fuel, producing less carbon dioxide per joule than delivered by either coal or oil, and far fewer pollutants than other fossil fuels. It is often viewed as a transitional energy source as the world moves from oil to more sustainable sources due to global warming. Portions of the Town, including the LaFayette Hamlet, are served by piped natural gas supplied by National Grid (see Section __, Infrastructure). The Tennessee Gas Pipeline, which stretches from the Gulf of Mexico and splits to serve New York City and Boston, crosses the north end of the Town. A compressor station is located off Sentinel Heights Road to maintain pressure on the line. The access to large volumes of natural gas in the Town could be a benefit to economic development activities.

Much of Onondaga County, including the Town of LaFayette, is located over the Marcellus Shale Formation and the deeper Utica Shale Formation. The Marcellus formation is a unit of marine sedimentary rock found in eastern North America. Named for a distinctive outcrop near the village of Marcellus, just west of LaFayette, it extends throughout much of the southern New York, northern and western Pennsylvania, eastern Ohio, through western Maryland, throughout most of West Virginia, and extends into extreme western Virginia. The formation tends to be shallower at its northern reaches, including LaFayette. The Utica formation partially underlies the Marcellus formation and extends further northward. Both formations contains enormous reserves of largely untapped natural gas, and their proximity to the high-demand markets along the East Coast make them an attractive target for energy development, although the Marcellus formation is likely to see development far more quickly. There are already natural gas wells LaFayette and surrounding towns that extract natural gas not trapped within the shale formations.

The somewhat hilly terrain in the Town may limit significant development of the shale gas reserves in the community. There are, however existing natural gas leases in the Town, particularly in the southwest (west of I-81) and the east-central area near the border with Pompey that could be developed should the process be approved for use in New York. Regardless of the level of activity within Town borders, large-scale development and drilling in the region may have profound impacts on the Town's environment, infrastructure, housing, character, and economics.

The extraction of natural gas in the region would provide many potential benefits, including jobs, royalties to property owners, and increased tax revenue, in addition to bolstering national efforts for energy independence. However, there are a number of negative impacts that have caused significant concerns in the region. The nature of the shale formation requires specialized technologies to extract. The most common method is hydraulic fracturing, also know as hydrofracturing, hydrofracking, fracking, and simply frac. This is a process whereby water, various chemicals, and often sand, are pumped into the rock formations at high pressure, resulting in the creation of fractures in rocks, the goal of which is to increase the output of a well. This process had been used for over 60 years in more than one million wells. The newer, high-volume horizontal slickwater



fracturing, such as would be used locally, is a much newer process. The chemicals in the hydrofracturing fluid could pose environmental hazards, particularly to groundwater. This can be due to surface spills at the drilling site, spillage of fluid during transport to a treatment facility, failure of underground pipe casings, or other unforeseen accidents. Large volumes of recaptured contaminated wastewater also needs to be cleaned, processed, and disposed. Other concerns include the industrialization of farmland and open space, damage to roads and bridges from heavy truck traffic, increased housing demand, visual blight, social problems, and a loss of community character.

The development of the shale gas formations has the potential to significantly impact much of area, including, directly or indirectly, the Town of LaFayette. Although it is unlikely that significant drilling or extraction would occur within the Town limits, it is possible. The Town should remain aware of, and be actively involved in, any discussions or processes related to the natural gas extraction process. The Town must also be aware of any impacts that threaten its rural agrarian character, and the potential for road and other infrastructure damage. The Town should proactively work to ensure that other potential negative impacts are fully mitigated and that the opportunities provided by extraction are measured against potential threats. Local municipalities are often limited in the level of local oversight and control over the extraction of natural resources. A number of communities in New York have passed zoning changes that effectively prohibit hydrofracking in the community, and these laws are currently under litigation. The Town will need to work closely with other County municipalities, Onondaga County, and with New York State to protect the environment and the quality of life treasured by residents, while ensuring that residents and government reap any financial benefits.

COMMUNITY FORESTRY

Trees and vegetative cover in developed areas benefit communities in many ways. Trees help to manage stormwater, clean the water and air, improve ground water recharge, and provide a home for wildlife. People generally prefer to shop along tree-lined streets in hamlets and villages and to live on tree-lined streets in neighborhoods. Trees can increase property values and improve quality of life in a neighborhood. It is more pleasant to walk along streets lined with trees, as they shield pedestrians from traffic, sun, and wind.

Trees in the LaFayette hamlet and other developed areas in Town positively contribute to the character of those areas, especially large shade trees. They provide visual interest year-round. The Town should plant trees along the streets in the Hamlets of LaFayette and Cardiff, and other more developed parts of Town, where trees are lacking. Large shade trees should be planted where possible, and smaller ornamental trees should be planted under utility wires. The Town should also replace trees in the public right-of-way when they are removed due to damage or age. The Onondaga County Cornell Cooperative Extension (CCE) office organizes bulk bare-root tree purchasing each fall for municipalities. The Town can participate in this program, and have Highway Department employees or volunteers plant the trees to keep costs low.

In addition to developed areas, salt-tolerant trees can be planted along Interstate



81 to screen the highway from Town, and to screen unattractive buildings or sites from the highway. This will help improve the quality of life in Town, and improve the character of the community to those passing on I-81.

Invasive Species - Invasive species, or non-native species whose introduction causes economic or environmental harm, are a growing problem across the globe. Currently, the most urgent issue with invasive species for municipalities in Central New York is the Emerald Ash Borer (EAB). The EAB is an invasive Asian beetle that infests and kills North American ash species (*Fraxinus* sp.) including green, white, black, and blue ash. It usually kills a tree within two to four years of infestation. The EAB spread recently from Midwestern states and has been found in western New York, the Hudson Valley, and across the Canadian border, as of 2011. It is thought the borer will reach Central New York soon, if it has not already. In many communities, Ash trees were planted as street trees for many decades, creating a potentially costly situation if they all need to be removed. The Town of LaFayette should prepare by inventorying their street trees in the Hamlets and trees on Town property to determine how many, if any, Ash trees are its responsibility. Infested and dying Ash trees can become a hazard and liability for the community. Any Ash trees found should be monitored on an annual basis and removed if needed. It is possible to treat individual trees to prevent infestation, but this is costly and must be repeated over time, and therefore treatment is only recommended for important and valuable specimen trees. Other invasive species of concern are the Asia Long-Horned Beetle and the Hemlock Woolly Adelgid. Cornell University and the Onondaga County CCE office are useful resources for more information on managing EAB and other threats to community forests.

SUSTAINING OUR NATURAL RESOURCES

Growth is both inevitable and often desirable for a healthy community. The way a community manages its growth directly impacts not only the built environment but also all natural resources within the local jurisdiction and beyond. How growth in the Town of LaFayette might affect land use patterns, open space, and agriculture is discussed in their respective sections in this plan. However, buildings and energy usage have a significant impact on our natural resources, and are discussed here. Utilization of green building techniques, alternative energy sources, and interior home improvements that promote energy efficiency and conservation will make the Town a better place to live.

Green Building – The goal of building more sustainable buildings and making existing buildings “greener” is to reduce the overall impact of the built environment on human health and the natural environment. This can include efficiently using energy, water, and other resources; protecting occupant health; and reducing waste, pollution, and environmental degradation. Currently, buildings contribute over 39% of all carbon dioxide emissions. Most of these emissions come from the combustion of fossil fuels to provide heating, cooling, and lighting, and to power appliances and electrical equipment. The Town should support green building standards for the construction of new buildings and homes. This could include promoting Leadership in Energy and Environmental Design (LEED) standards, and using renewable energy sources and new energy saving technologies. See Section VI. Housing for more information.



The Town has an opportunity take a leadership role in green building by modeling sustainability and energy efficiency in its own buildings and practices. The first step to reducing usage is to make existing buildings more efficient. The Town should hire a contractor to perform an energy audit on the Town Hall, Library, Community Center, and/or other municipally owned buildings. There are currently opportunities with the New York State Energy Research and Development Authority (NYSERDA) that cover the cost of energy audits for local governments, under their FlexTech program. Typical energy audit results will provide steps that can be taken to improve energy efficiency, and often include the cost and the return on investment, so the Town can determine the most appropriate projects to do. The Town should highlight their experiences in their newsletter or elsewhere, encouraging Town residents to do the same, since at this time most New Yorkers and businesses are eligible for a free or reduced cost home energy audit.

Alternative Energy - After reducing energy usage, the next step to energy independence is to use alternative energy sources. This could include solar photovoltaic, solar thermal, geothermal, wind, biomass energy, or methane digesters for farms. Which method is most appropriate will depend on the building's location and the site's environmental factors. The Town has recently updated its zoning code to allow for and regulate windmills. The Town should consider also updating the zoning regulations to allow for and regulate other forms of alternative energy.

There are currently three houses in the Town of LaFayette who have recently installed windmills on their properties. It is likely the trend to use alternative energy sources will continue to grow. The Town can encourage and advance the use of alternative energy by supporting building owners interested in this. LaFayette can also encourage developers of subdivisions to include some form of alternative energy to provide energy for either individual homes, or for the entire development. See Section VI: Housing for more detailed information.

GOALS AND IMPLEMENTATION MEASURES

GOAL 1: Future development and redevelopment within the Town will not cause degradation of water resources.

IMPLEMENTATION MEASURES:

- A) Ensure that DEC regulations regarding stormwater pollution prevention plans are strictly followed for all new developments and that they are properly implemented and managed. Regularly review and revise, as needed, all local regulations dealing with stormwater runoff and retention to maximize protection of surface and groundwater resources.
- B) Encourage use of alternative and emerging technologies for existing and new developments, such as pervious paving materials or other green technologies that minimize, redirect, or treat runoff from parking lots and driveways.



- C) Utilize the SEQRA process to minimize impacts from development proposals adjacent to, or with the potential to impact, wetlands.
- D) Ensure natural gas, and other natural resource extraction, does not harm surface or groundwater resources.
- E) Gather third party baseline data for streams and public water sources so that any potential future contamination from natural gas extraction processes can be documented and verified.
- F) Implement a program that encourages private property owners to regularly check the quality of their well water in order to determine baseline well water quality before gas drilling using hydraulic fracturing begins in the area.
- G) Work with other municipalities, and County, State, and federal governments to preserve and protect the safety, quality, and quantity of the public water supply from any negative impacts related to natural gas extraction processes.

GOAL 2: Minimize flood risk and impacts of flooding

IMPLEMENTATION MEASURES:

- A) Discourage new development in the 100-year flood plain. Where such development does occur, ensure that site plan regulations and processes are sufficient to determine that new development will not exacerbate flooding concerns and that projects are designed to minimize risks to safety and property.
- B) In the event of a major flood that severely damages properties in the floodway, work to relocate/rebuild structures outside of the floodway.
- C) Require new developments to manage stormwater runoff on-site to the greatest extent practicable, as required by the DEC, and encourage the capture and reuse of rainwater.

GOAL 3: Support and promote the use of sustainable technologies and green building practices in the Town.

IMPLEMENTATION MEASURES:

- A) Encourage energy conservation and efficiencies and promote the use of alternative/clean energy sources in homes and businesses, such as wind, solar, geo-thermal and co-generation. Encourage new construction to be built to LEED, or similar, standards.



- B) Lead by example by undertaking energy audits on all Town-owned buildings, and by utilizing alternative energy sources, such as geothermal, wind, solar, and co-generation in all Town-owned building renovation or new construction projects to promote use of green technologies.
- C) Publicize the availability of free or low cost energy audits to homeowners and businesses via Town venues and seek grant funds to assist private property owners to make properties more energy efficient and environmentally sustainable.
- D) Support the renovation, reuse, or redevelopment of existing buildings as a more environmentally sustainable alternative than new construction due to the embodied energy in existing buildings.

GOAL 4: Ensure that future development and redevelopment within the Town complements and enhances the natural environment while not hindering or impeding desired development.

IMPLEMENTATION MEASURES:

- A) Inventory and identify sensitive environmental areas in the Town and designate Unique Natural Areas or Critical Environmental Areas as appropriate.
- B) Review and amend land use regulations to protect and enhance the natural resources of the community while ensuring that new or enhanced regulations are not overly cumbersome or limiting to new development.
- C) Strictly comply with SEQRA for projects that require such review to ensure protection of natural resources.

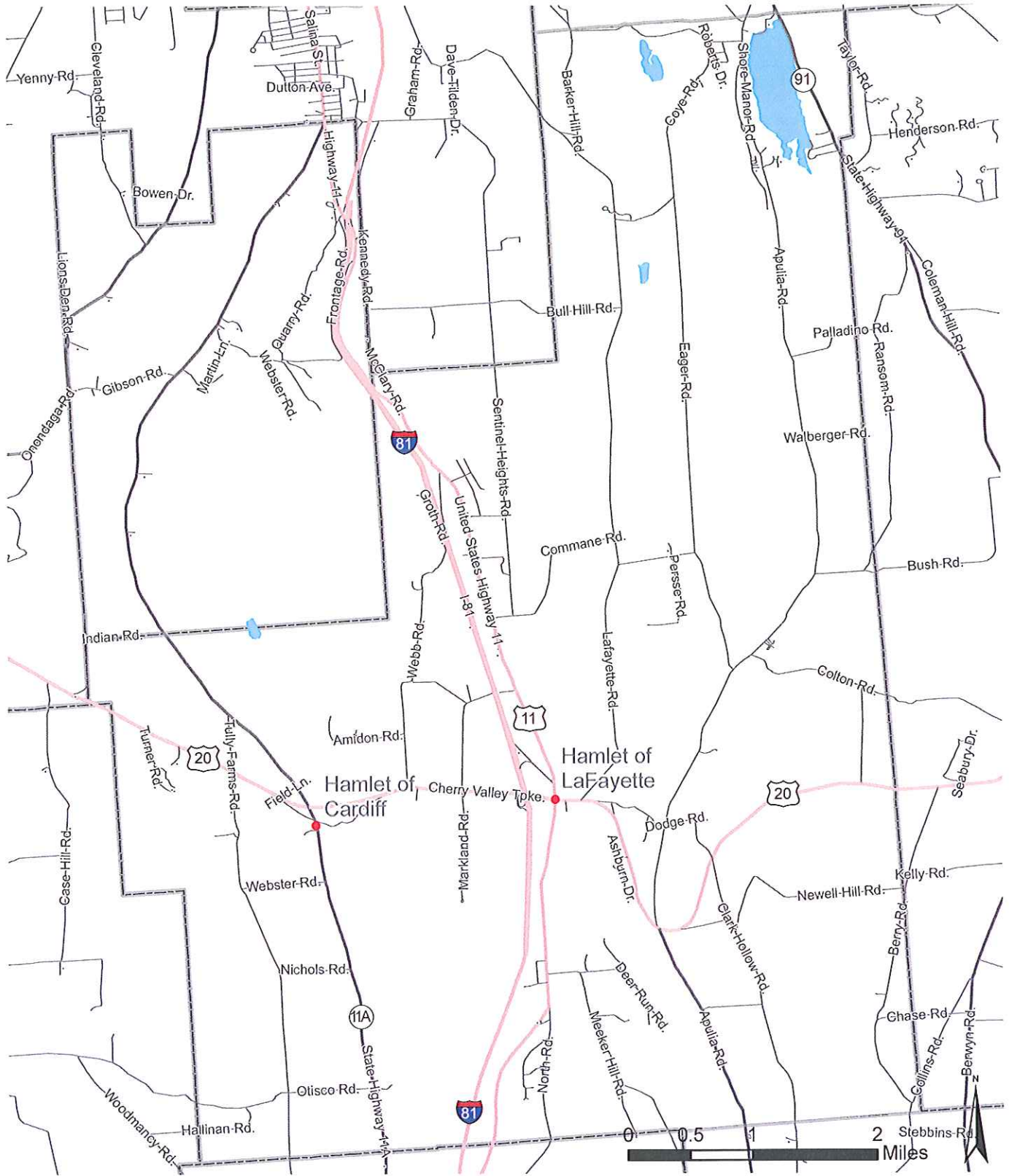
GOAL 5: Increase and improve the Community Forests in the hamlets and developed areas of the Town to enhance community character.

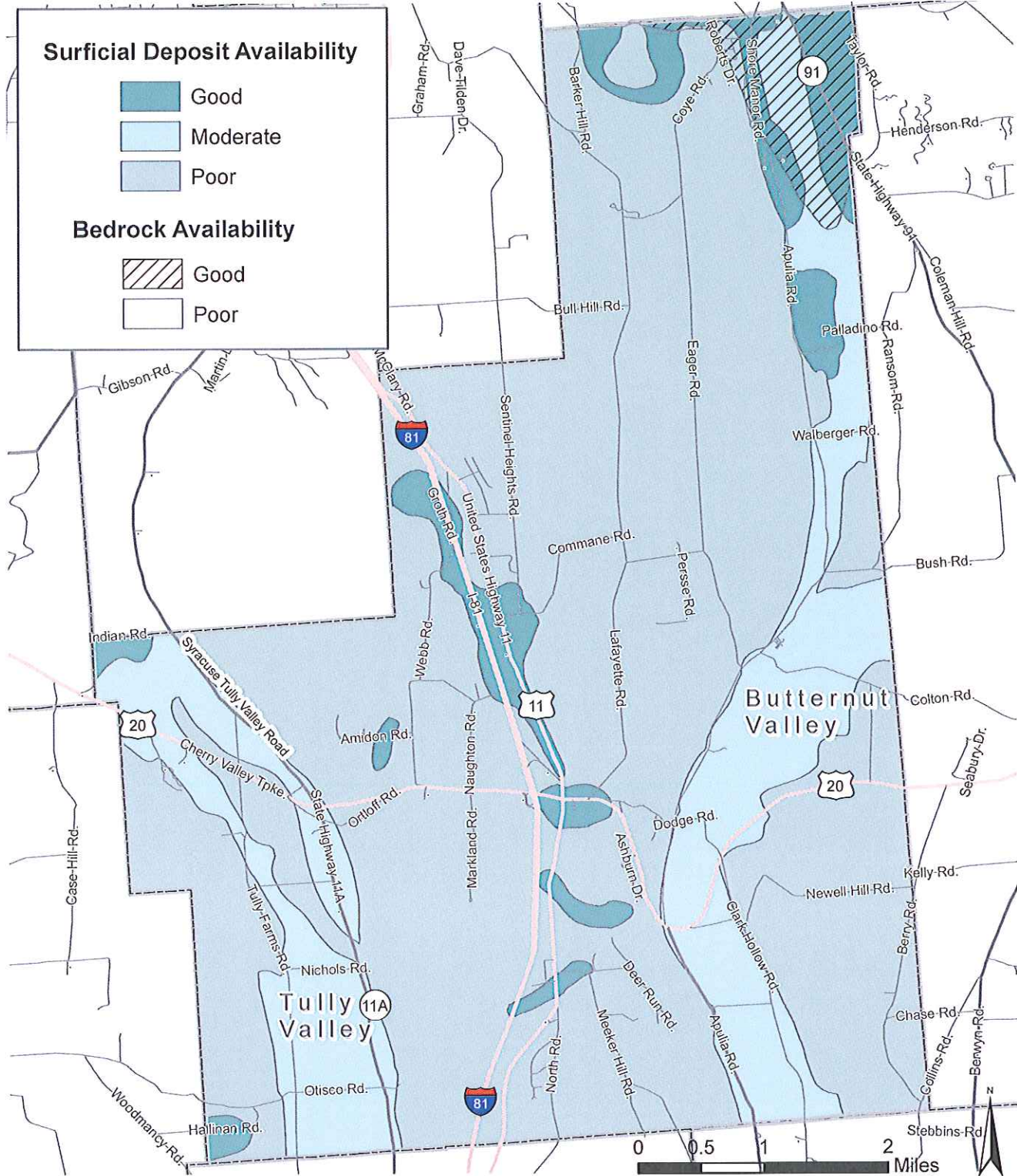
IMPLEMENTATION MEASURES:

- A) Establish a tree planting program to fill in areas of the hamlets lacking trees and to ensure a diverse public forest. This includes planting large trees where possible and smaller trees where necessitated by infrastructure.
- B) Coordinate with NYS DOT and property owners to plant coniferous, salt tolerant trees along the east side of I-81 to screen less attractive buildings or sites and minimize impacts from the highway.



-
- C) Inventory Ash trees on Town property and in the public right-of-ways. Monitor progress of the Emerald Ash borer in NYS and the health of Ash trees in the community, and take proactive action to protect Ash trees of significant value.
 - D) Remain aware of new and emerging threats to the community forest and implement actions to address their impacts.



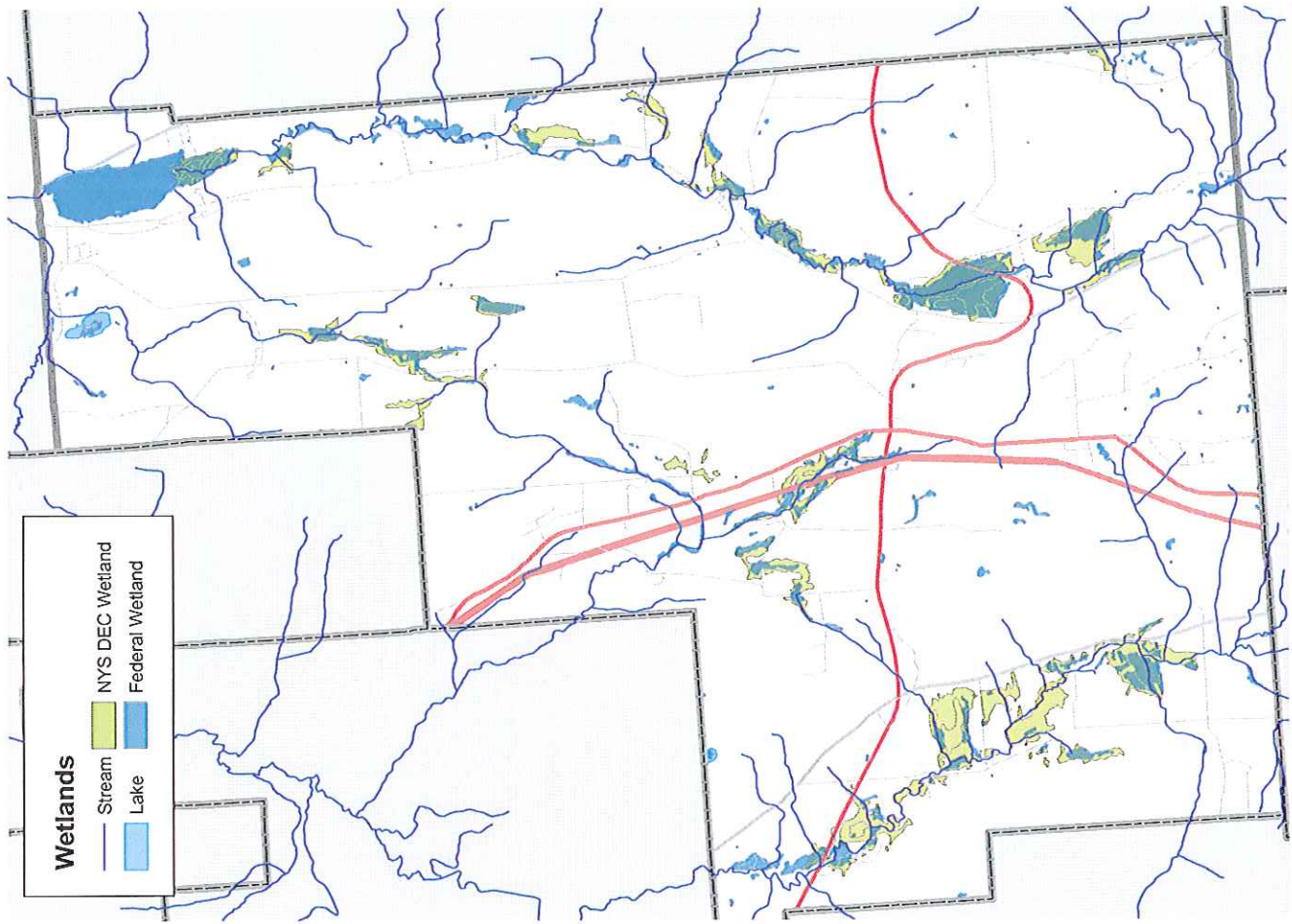
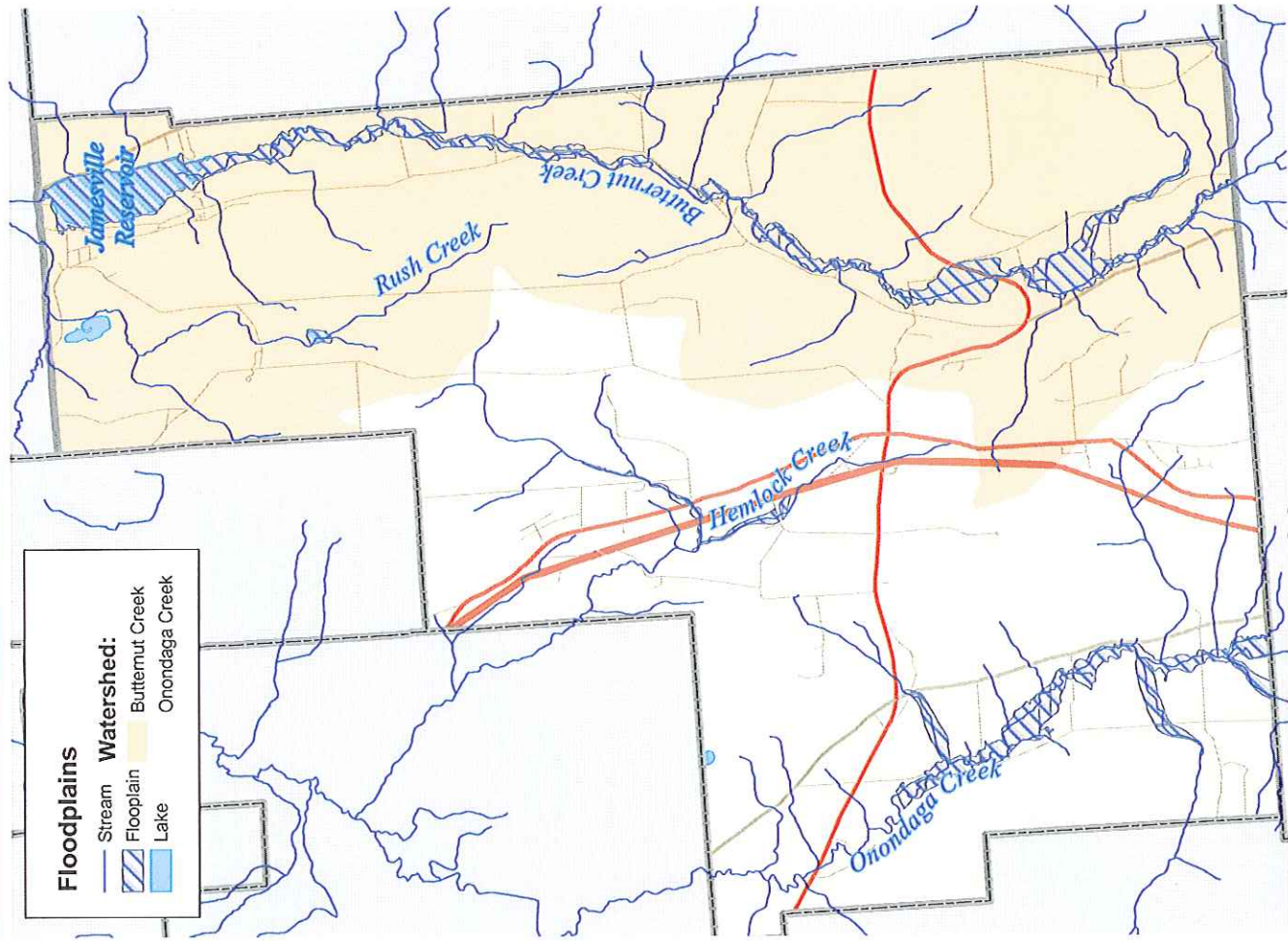


Data provided by Syracuse-Onondaga County Planning Agency.
 Data is approximate and should be used for general planning purposes only.

Date Created: 29 July 2011

Map __ : Groundwater Availability
 Town of LaFayette Comprehensive Plan

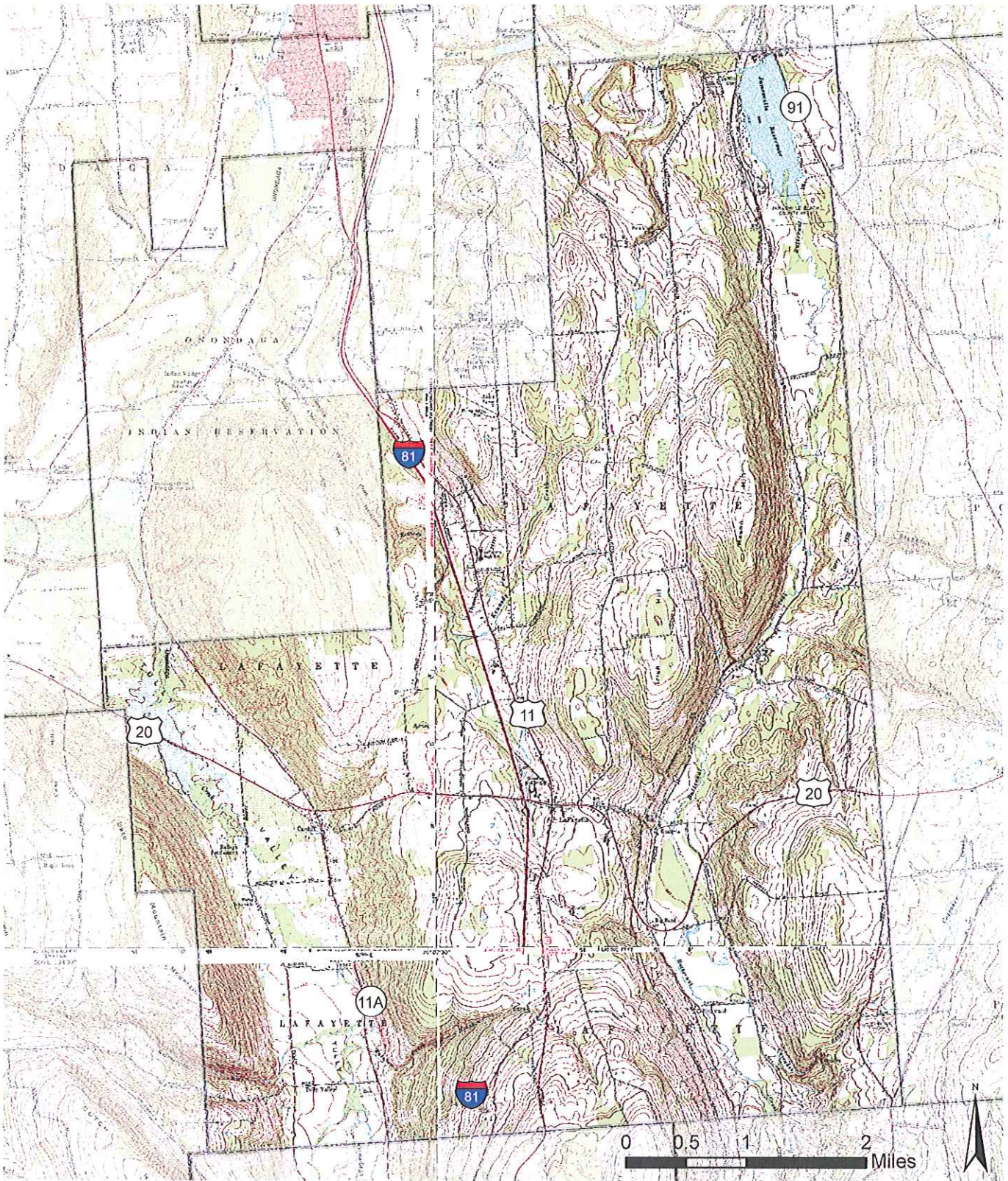




Map ___ : Hydrology
Town of Lafayette Comprehensive Plan

Date Created: 20 December, 2011





Data provided from United States Geologic Survey quadrangle maps.

Date Created: 23 August 2011

Map __ : Topography

Town of LaFayette Comprehensive Plan

