Comprehensive Land Use Plan 2025 - 2035

TOWN OF LERAY

Town of LeRay Comprehensive Land Use Plan Committee -

The Town would like to acknowledge and thank the Committee members:

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Lee Shimel, Zoning Officer,

Deb Biondolillo, Planning Board Chair,

Jan Oatman, Zoning Board of Appeals Chair,

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Joe Mclaughlin, Retired Military,

Cathy Fahsel, Fort Drum Integration Office,

Troy Chisamore, City Fireman,

Peter Souch, Business Owner,

Jack Brand, Trustee, Village of Evans Mills

Most of whom attended many committee meetings come snow, rain, or shine, and for embracing the public input and overall planning process.

Many Thanks to Morgan Melancon, Secretary to Planning and Zoning; Melissa L. Verne, Town Clerk; Mary Hebert - Deputy Town Clerk; and Nathan Toutant, Clerk to the Supervisor

Special thanks to the former Town Supervisor, Ron Taylor and former Town Clerk, Mary Smith

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LeRay Vision Statement – 2023

"The town's vision is to continue to hold onto its rural character and leverage sustainable growth while preserving its natural, small-town atmosphere, agricultural, business and fort drum friendly status"

"Much of LeRay's quality of life depends on its rural environment – scenic views, working farms and wildlife habitat. Along with great schools and its small-town friendliness - our residents, farms and businesses continue to cherish these assets."

"Being a support community for Fort Drum and the 10th mountain division also inspires the town's market attractiveness, diversity and quality of life. These assets continue to lead to new development opportunities, amenities, and challenges".

Town of LeRay Comprehensive Plan Committee

Contents

Introduction

Plan Purpose

NYS Town Law Section 263 requires zoning "regulations to be in accordance with a comprehensive plan." The present Town of LeRay Comprehensive Plan was adopted in late 2008. The bulk of the Town Zoning Regulations were written/updated in 2014 with minor amendments initiated as issues arose since then such as wind facilities, and later solar energy facilities to include battery energy storage regulations more recently.

Plan Process

From late 2019 through early 2020, the Town Board discussed the need to update its Comprehensive Plan and approached the Jefferson County Planning Department for technical assistance. Soon thereafter, the Covid 19 Pandemic limited public meetings and essentially delayed the update process initiation. Early in 2021, the Town restarted the process and appointed members to a Comprehensive Plan Update Committee. In May, the Committee met and discussed potential public engagement/input tools such as a community survey, brain storming issue exercise, and public meetings.

A major part of developing a comprehensive plan is the process itself. Public input can be the most important part as the community discussion that ultimately leads to developing the vision, goals and strategies. This input process offers the opportunity for all residents and landowners to voice an opinion on how LeRay should consider current and future development needs. The plan will only be as good as the support and involvement it has from the residents of LeRay.

A successful comprehensive plan will provide the direction to manage future growth by establishing a vision, goals and strategies to allow governmental leaders, businesses and individuals to pursue sound and consistent land use decisions through the zoning law and project reviews.

New York State Town Law Section 272-a authorizes municipal boards to adopt and update comprehensive plans and sets the process to be completed before adoption. This section of law does not have specific requirements for the content of a plan, but it suggests content areas (listed on the following page). Along with the inclusion of regional considerations, the comprehensive plan should address local and regional growth needs and priorities.

The Committee decided that both an online survey and copies of the survey mailed to each address in the Town, would be the best way to collect information from the greatest number of residents and landowners. A summary follows in this Chapter.

The next step was to conduct two public meetings (in one evening) in two locations that included various stations of information, including the survey summary and separate brainstorming station to allow attendees to identify the community's strengths, weaknesses, opportunities and areas of concern in list form and on a map. The next committee meeting was then used to make the list of Town issues more complete for all four categories.

After the survey was tallied and SWOAOC issue list completed, a chapter by chapter draft inventory was initiated, much of which was utilized at the second public meeting to further gauge public sentiment and input.

The last piece in the planning process was the Committee public hearing, which involved a brief summary of the planning process, selected overview of the plan contents, and input or comments received from the public attendees.

Thereafter, the Committee considered the comments and whether to edit, adjust, or confirm segments of the plan. They then considered referring the Final Draft to the Town Board for their consideration and adoption after conducting their own public hearing as required.

NYS Town Law – Comprehensive Plan Content:

- ✓ *General statements of **goals, objectives, principles, policies, and standards** upon which proposals for the immediate and long range enhancement, growth and development of the town/village are based.*
- ✓ *Consideration of the **regional needs** and the official plans of other governmental units and agencies within the region.*
- ✓ *The **existing** and proposed **location** and **intensity** of **land uses**.*
- ✓ *Consideration of **agricultural uses, historic and cultural resources**, coastal and **natural resources** and **sensitive environmental areas**.*
- ✓ *Consideration of **population, demographics, and socio-economic trends** and future projections.*
- ✓ *The location and types of **transportation** facilities.*
- ✓ *Existing and proposed general location of **public and private utilities and infrastructure**.*
- ✓ *Existing **housing resources and future housing needs**, including **affordable housing**.*
- ✓ *The present and future general location of **educational and cultural facilities, historic sites, health facilities, and facilities for emergency services**.*
- ✓ *Existing and proposed **recreational facilities** and **parkland**.*
- ✓ *The present and potential future general location of **commercial and industrial** facilities.*
- ✓ *Specific policies and strategies for improving the **local economy** in coordination with other plan topics.*
- ✓ *Proposed measures, programs, devices, and instruments to **implement the goals and objectives** of the various topics within the comprehensive plan*
- ✓ *All or part of the plan of another public agency.*
- ✓ *Any and all other items which are consistent with the orderly growth and development of the town/village.*

Town Overview

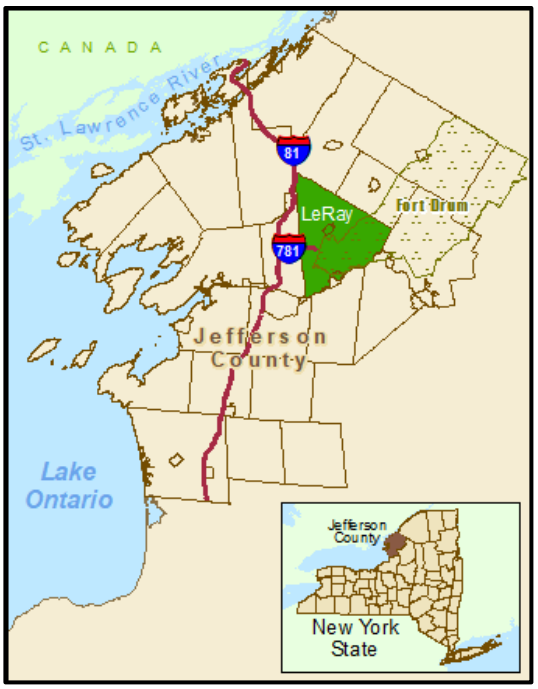
Located near the center of Jefferson County, the Town of LeRay is uniquely situated between four significant regions of New York State: the Tug Hill Region to the south; the Adirondacks to the east; the St. Lawrence River Valley to the north; and the Great Lakes Region to the West. Another unique aspect of LeRay is that nearly 40% of the town's land is occupied by the Fort Drum Military Installation – Home of the 10th Mountain Division with 14,998

military personnel, and 3,912 civilians as well during FFY 2020.

The Town also contains two Villages, Evans Mills and Black River, as well as several hamlets, the largest of which is Calcium.

The Town's proximity to both the City of Watertown and Fort Drum (which has gone through multiple periods of expansion and some contraction) influence the local economy greatly. In 1984, the 10th Mountain Division was created and assigned to Fort Drum which led to a period of economic and residential growth throughout the Region. In 2004 and 2005, Fort Drum (and the 10th Mountain Division) was again restructured which led to a third Brigade established at the post, resulting in additional economic and residential growth in the region, but also significant commercial and residential expansion within the Town.

LeRay's western boundary is a north and south line against the Towns of Orleans and Pamelia, the northeast side joining Theresa and Philadelphia, and the southeast border formed partially by Wilna but principally by the Black River, which is its main boundary water course. The next largest stream in size is the Indian River, which enters from Philadelphia, flows in a southwesterly course to within one mile of the Village of Evans Mills, then turns sharply to the north and returns to Philadelphia. The Towns of Rutland and Champion form the rest of the southern boundary on the other side of the Black River.



Brief History

LeRay received its name from James LeRay de Chaumont, the proprietor, and was formed from Brownville, February 17, 1806. Part of LeRay was removed to form Antwerp in 1810, a part of Wilna in 1813, and Philadelphia and a part of Alexandria in 1821.

Settlement and development of the Town began under the proprietary of James D. LeRay and his agents. He sold the land in parcels suited to the wants and means of his purchasers, gave them sufficient time to complete their payments and asked that each build a log house and clear a certain amount of land annually.

The pioneer of LeRay was Benjamin Brown, brother to General Jacob Brown, the General being the first permanent settler in the county north of the Black River. Both came to the region and made their respective improvements while the territory formed a part of Oneida County. In the fall of 1801, Benjamin Brown visited LeRay in quest of a suitable site to erect a mill and selected a location on Pleasant Creek, about on the site of the former Le Raysville. In due time, the dam and mill were completed.

Much of the early settlement was accomplished under the agency of Jacob Brown, acting for James LeRay. LeRay chose a spot just outside the hamlet of LeRaysville for his permanent residence where a large and commodious dwelling was built. In 1825 it was replaced with a mansion still more pretentious, which stands to this day. The building is well preserved and is still used as a residence.

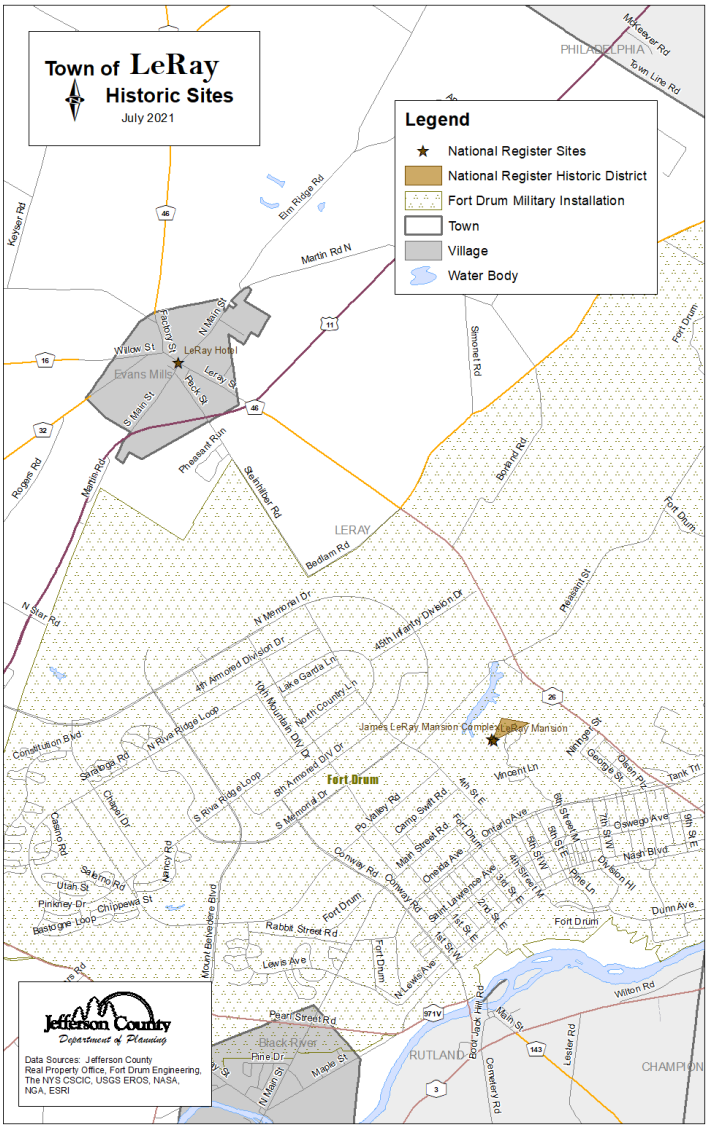
Mr. LeRay was not a continuous dweller in the town, but came and went as his business interests demanded. He improved the breed of sheep by importing merinos from his flock in France. He also gave great attention to improving the locally available horse breeds to enhance farming and transportation.

The first settlers of LeRay formed a mixed population of Yankees and Frenchmen, with a spirit of enterprise and progress. Each began his life work here by building a log cabin, clearing a piece of land for grain and crops, building up gradually, and everything from the stump.

LeRay built roads through the settled portions of land and extended them as necessity required. Road number 1 was surveyed in 1806, extending from Evans Mills to the highway leading from Benjamin Brown's to the bend in Black River. Road number 2 was run by him in May of that year, and extended from the bend in the river to Philadelphia.

Historic Sites

There are two sites on the National Register within the Town of LeRay: The LeRay Hotel in the Village of Evans Mills, and the James LeRay Mansion on Fort Drum.



Indeed, the records show that the principal business of the highway commissioners for several years related to road construction for the accommodation of constantly increasing settlement.

Evidence of prosperity can also be seen in the early census reports. By 1810 the Town inhabitants numbered 1,150 and included seven sawmills, one grist mill, a carding mill, and two stores. By 1822 industry in LeRay had grown to a fulling (wool) mill, a clothier, tannery, potashery, distillery, and a spinning wheel manufacturer. A wagon shop, general store, two taverns and a doctor's office were also operating in LeRay around this time.

The next few census reports one notes the changes in population. By 1820 residents totaled 2,944, by 1830 there were 3,430, and by 1840 there were 3,721 residents. However, by 1850 the population started to decline with 3,654 residents, by 1860 there were 3,156, by 1870 there were 2,862, 1880 numbered 2,660 and by 1890 the number had declined to just 2,565.

During the 1800's the highest population was reached in 1845 with 3,853 or nearly 1,300 more than in 1890. This started as some communities that drove growth in land conversion and supported farming and construction of homes began to decline, due to the transfer of food production in the west of the nation and the tendency of youth to abandon the farm for less arduous pursuits found in the city and villages, resulting in less profitable agricultural pursuits unless under the most favorable conditions.

With the exception of wartime which would disrupt prosperity, forests gradually gave way to farms of fertility and small but flourishing villages appeared in convenient parts of Town. Stores were opened, and churches and schools were established during this time.

In 1854 a railroad line was built through the town from the County Seat extending northward, affording a ready market for the agricultural and manufacturing products, and value to the property along its route. This established Evans Mills as a shipping point of importance. Later, when in 1872 the Carthage, Watertown and Sackets Harbor railroad was completed, while on the south side of the Black River, the Town benefitted by the substantial industries constructed on the LeRay side of the river.

Le Raysville

Among the several trading centers established in the Town for accommodation of inhabitants, the hamlet of LeRaysville was the oldest. Here Benjamin Brown made the first improvement in 1802 when he built a mill on Pleasant Creek. In 1818 a mail route was established between Wilna and Denmark, by way of LeRaysville and that year a post office was established there. Previous to 1818 all mail for this locality came through the office of Champion and was generally brought to the Town by Mr. Le Ray or one of his employees. Around 1820, LeRaysville attained its greatest importance and size, and another tavern was opened on the opposite side of the creek.

After the departure of the proprietor (James Le Ray) for France, in 1832, and particularly after the removal of the land office to Carthage three years later, all interests in this historic hamlet began to decline. After the construction of the railroad through the western part of the town, local interests suffered seriously. Since that time (1854) Le Raysville has been a much less important hamlet in the Town. With the exception of one or two small feed stores and a custom feed mill being maintained for the accommodation of neighboring farmers, other enterprises have been abandoned. Even the old mill pond on Pleasant Creek with limited capacity to continue supplying power to the mill, is now used for other purposes (as of 1880s).

The land surface in the Town of LeRay is level with gently rolling areas, the soil is mainly a clay loam and at one time produced large quantities of the best hay raised in the State of New York (According to the Jefferson County Bicentennial History Booklet - 1976).

Evans Mills

Ethni Evans, the founder of this pleasant and thrifty village, came from Hinsdale, N.R. in 1802 and was employed by General Brown in making the pioneer beginning in Brownville. In the course of his labors Mr. Evans visited the Brown settlement in what later became LeRay, where it is said he also worked. At the same time he looked about for a suitable place in a water-power location. Thus he found the junction of Pleasant and West Creeks, and in 1804 at once made a clearing, built a log house, and began the construction of a dam across the stream, but not before 1806 did he commence his mills.

The mills led to the hamlet, and then later to the village in its glory days one of the most enterprising municipalities in the County, for being located in the center of a rich agricultural region. The lands were taken rapidly and fine farms replaced the primal forests. The early settlers were thrifty and established a trading center. By 1808, a store, tavern and blacksmith shop were established and thus a hamlet began.

As early as 1812 the inhabitants numbered about 100. By 1834, more prominent businesses became successful. A grist mill, a fulling and cloth mill, tannery, two pot asheries, and two distilleries were operating. Local blacksmiths also made axes, hoes and other edged tools. Spinning wheels and looms were made here, a wagon maker became established, as well as a cabinet shop. There was a store where now a brick hotel stands (1890's). Another store which specializing in liquor, along with the stone tavern built in 1821 operated. A famous stone hostelry quarried with stone from the northern part of the town also operated. Other hotels came and went. Another blacksmith was established but soon manufactured scythes, axes and hoes with a trip hammer that worked with water power. Another hotel was built (called the Railroad Hotel) after the railroad began operation.

A post office was established by 1824. In 1854 the railroad was opened for traffic and the village at once assumed a position of importance among the trading centers of the county. As a shipping point for agricultural products it ranked well while the railroad operated. In the vicinity several cheese factories operated, one in the village, one north of the village and one also nearby comprised the chief manufacturing in the immediate area. The village was incorporated in 1874, including 720.44 acres of land and about 500 inhabitants.

Sanford's Corners (present day Calcium)

In the southwest part of the Town, Roswell Woodruff was the first settler making improvements in 1804. Later, pioneer Woodruff sold his property to Captain Ezekiel Jewett, and when the intersecting roads were opened the place became known as Jewett's Corners. Mr. Sanford, for whom the place was finally named, erected a large stone building as a store which did not open as such. A brick tavern was built about the same time for the comfort of travelers along the highways, but the building afterward was used as a cheese factory. A post office was established here in 1828, that being the only business that has endured. In 1853 a limburger cheese factory was established and enlarged in 1887. The railroad was established here in 1855.

Black River Village

In 1806 a saw mill was built on the south side of the river, but it was carried away by high water the next year. Around 1815 another mill was built below the village, with little evidence of a hamlet at the time. By 1826, a few families lived there.

By 1828 the first bridge across the river was built by two individuals interested in developing the lands in the vicinity. In 1831 the first hotel was constructed and a store shortly thereafter. A dam across the river was also built in 1831, which powered a sawmill that operated for 10 years. In 1836 a grist mill was established, but this and the sawmill burned in 1843. By 1845, both establishments were replaced with more substantial buildings.

In 1860 Black River Bending Company established a bent chair stock, incorporating in 1889. At the time, it employed 50 persons. Another wood pulp company incorporated in 1888 on the lower island at the site that had a sawmill which was carried away

by flooding years prior and became a sash and door factory, and still later the pulp mill.

By 1890, another pulp and paper mill became one of the substantial industries and provided electric lights for the village. Jefferson Paper Company on Poor's island was incorporated in 1887 and manufactured lumber, wood pulp and paper.

The construction of the railroad on the south side of the Village along with plentiful waterpower both played major roles in expanding industry and led to pressure to incorporate. The first village election occurred in 1891.

Communities in the Fort Drum region, especially those closest to the Fort Drum gates, have experienced substantial population growth and development since the arrival of the 10th Mountain Division.

Pine Camp/Fort Drum

In 1906 Pine Camp was established (in the area that is now Fort Drum) and grew steadily until World War II. ….The first permanent garrison was assigned to Fort Drum in 1974, the same year the Fort received its current name. The 10th Mountain Division has been the primary tenant at Fort Drum since 1984, with many facilities at the post constructed between 1986 and 1992.

The post's history dates back to 1907, when the NY National Guard established an encampment known as Camp Hughes on 800 acres of land on the Black River opposite Felts Mills. In 1908, Brigadier General Frederick Dent Grant, son of General Ulysses S. Grant, arrived to train with 10,000 soldiers on land leased from the Watertown Chamber of Commerce. He found the Pine Plains to be an ideal place to train troops, and the War Department purchased the land the following year. Pine Camp was established as a permanent National Guard training facility.

In 1935 the camp was in the national spotlight because the largest peacetime maneuvers were conducted here by the First U.S. Army. For almost two days, over 36,500 soldiers from throughout the Northeast conducted tactical exercises judged to be so successful that the War Department purchased another 9,000 acres of land. With the outbreak of World War II, Pine Camp was selected for a major expansion. An additional 75,000 acres of land was purchased in 1941. With this land purchase, 525 families were displaced, and five entire villages were eliminated. In a period of 10 months, between 1941 and 1942, and at a cost of $20 million, an entire complex of barracks, mess halls, storehouses, quarters, headquarters, recreational buildings, guardhouses, and a hospital were constructed.

The 4th Armored Division was activated at Pine Camp in 1941 and joined the 45th Infantry Division, 5th Armored Division, and seven separate battalions training on the expanded Army post.

During World War II, the post served as a prisoner of war camp. Seven prisoners who died there, one Italian and six Germans, remain buried in the Sheepfold Cemetery.

In 1951, Pine Camp was re-designated as Camp Drum, in memory of Lieutenant General Hugh A. Drum, a commander of the First U.S. Army in the early days of World War II. The installation continued to host Reserve Component summer training and short-term Regular Army unit training, including mass tactical parachute drops by the 11th, 82nd, and 101st Airborne Divisions. The 278th Regimental Combat team, a federalized Tennessee National Guard unit, was posted there from 1951 to 1953.

IN 1974, the Army re-designated the installation as "Fort" Drum, to reflect the post's year-round training mission, and a permanent garrison staff was assigned. The post was a summer training site for approximately 50,000 Active and Reserve component soldiers, and an additional 20,000 on weekends throughout the year.

In 1984, the Army announced Fort Drum would be the new home of the 10th Light Infantry Division. The unit was activated in February 1985 and the unit was renamed the 10th Mountain Division (Light Infantry). By 1990, the installation was home to approximately 10,000 soldiers and 15,000 family members.

The construction of 130 new buildings, 35 miles of roads, and 4,272 units of family housing was completed at a cost of $1.3 billion, making Fort Drum one of the most modern and attractive military installations in the world. Wheeler-Sack Army Airfield was later expanded to include a 10,000-foot main runway capable of supporting the largest military and civilian aircraft and a rapid deployment facility for efficient processing of a passengers and cargo. The training range complex continues to evolve, providing a combination of virtual training facilities, outdoor and live-fire ranges.

The 10th Mountain Division (Light Infantry) has been one of the most deployed units in the U.S. Army. The division has deployed units to combat and peacekeeping operations in Somalia, Haiti, Bosnia, Kosovo, the Horn of Africa, Afghanistan, and Iraq. The 10th was the first division of any kind formed by the Army since 1975 and the first based in the Northeast since World War II. Fort Drum has also been the mobilization and deployment site for almost 27,000 soldiers in 985 Reserve component units from the U.S. or units throughout the U.S. in support of the Global War on Terror.

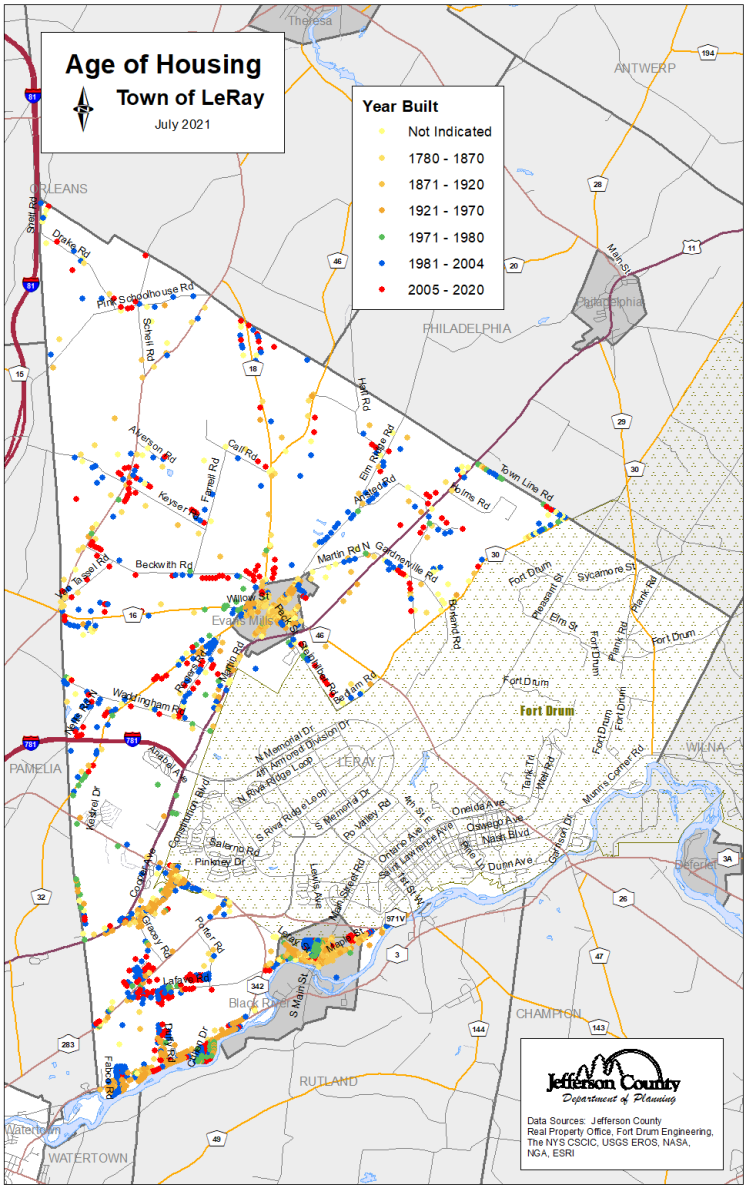
Today, Fort Drum is capable of rapidly deploying forces anywhere in the world. As the Army transforms to address current and future requirements, the installation remains and exceptional training and living environment.

Not unlike other Towns, LeRay and its Villages and Hamlets have undergone many social, agricultural and economic changes. Today, the Villages may not flourish with industry like they did in the past, the farm operations may not be as numerous, but Fort Drum's role in serving as one of the major economic engines in the Town and the region has been a mainstay since its establishment in 1949, along with the other major increases in personnel in 1984 and 2005/6.

While some areas of the Town have felt population and economic growth, Villages and Hamlets (with the exception of Calcium) have struggled and least in terms of population during the past 20 years. Despite some notable projects such as public libraries in Evans Mills and Black River, and ongoing upgrades to housing stock and some businesses, along with a few new business, village residents have remained flat or declined.

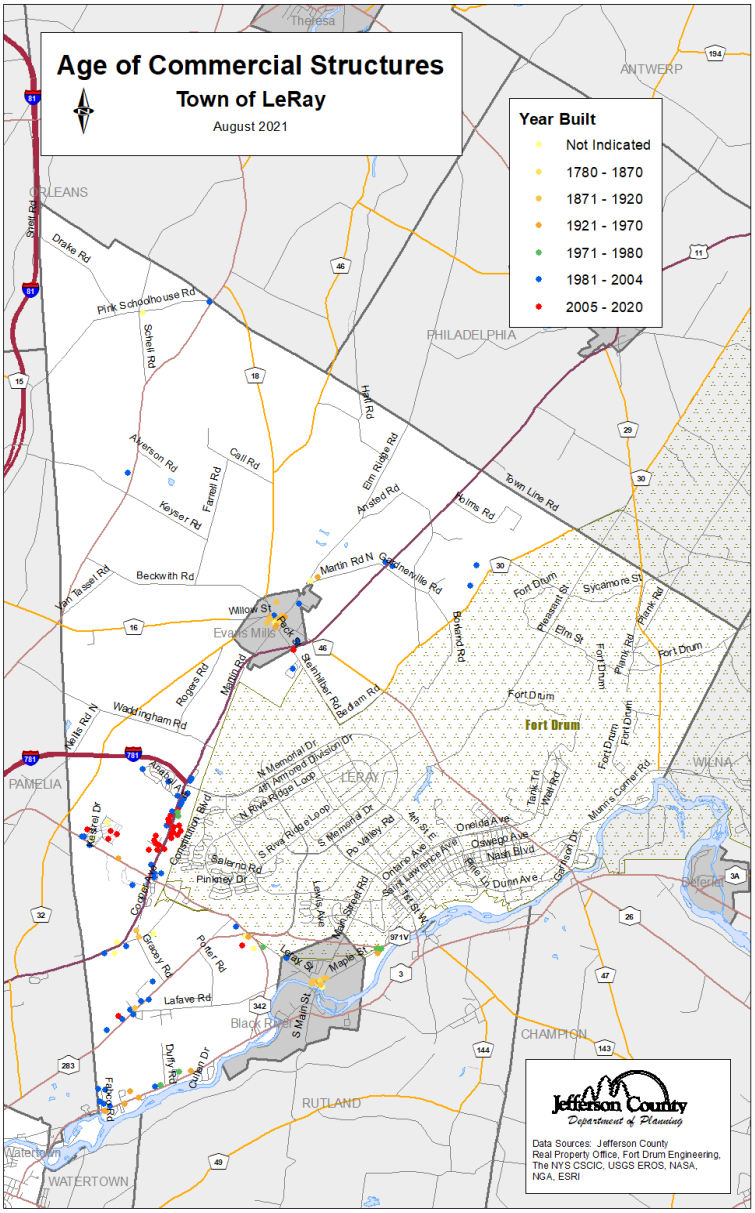
Town Age of Housing

The Town has clusters of older homes in the Village of Evans Mills and Black River, and others scattered where early settlement occurred. One can see the 1981 to 2004 time period experienced a housing surge, as well as another from 2005 to 2020. Both corresponded to Fort Drum expansions.



Town Age of Commercial Structures

The map below illustrates when commercial structures were built in the Town, which shows commercial expansion that corresponded to both Fort Drum expansions in troop personnel levels in 1984 and 2005/6.



Community Public Input

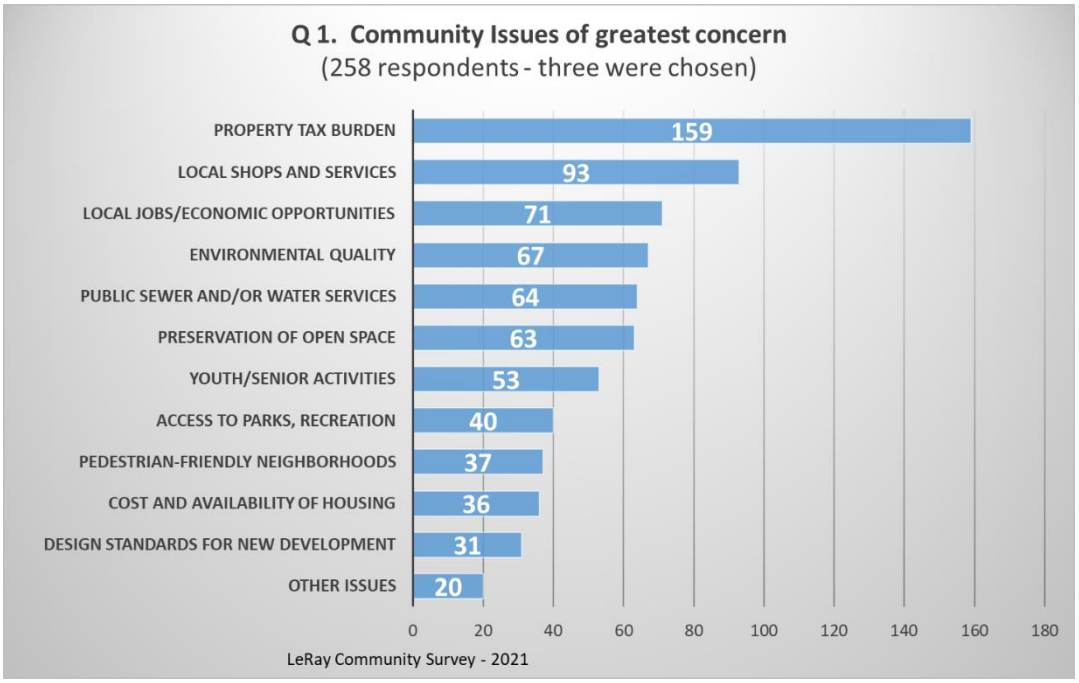
Early in the planning process, the committee members placed a high priority on gaining public input from Town of LeRay residents: civilian and military, business owners and visitors. The Town's economic diversity and of its people are some of its greatest strengths. Obtaining input from this diverse

Community Survey

An online community input survey was also mailed to each Town address, posted on the Town's website and either entered by the respondent or mailed-in to the Town Office. Some were left around Town at the post offices, libraries, and other public places. Those returned by mail were entered into the online system. It was then compiled and tallied based on the 258 respondents. Survey questions dealt with various local issues, economic development and business satisfaction, some demographics, renewable energy questions and quality of life. The survey was released in August of 2021 and primarily tallied online, then graphs were generated in excel based on the online responses. The survey content was largely based on the survey completed during the previous Comprehensive Plan in 2007/8 in order to allow comparison of responses over time which is discussed in the appendix.

Community Survey Summary

Question 1 dealt with community issues of greatest concern and three could be chosen. In terms of ranking, 61.6% indicated property tax burden with the most chosen issue of concern by 159 out of 258 respondents. The second most indicated community issue of concern was local shops and services with 26% of

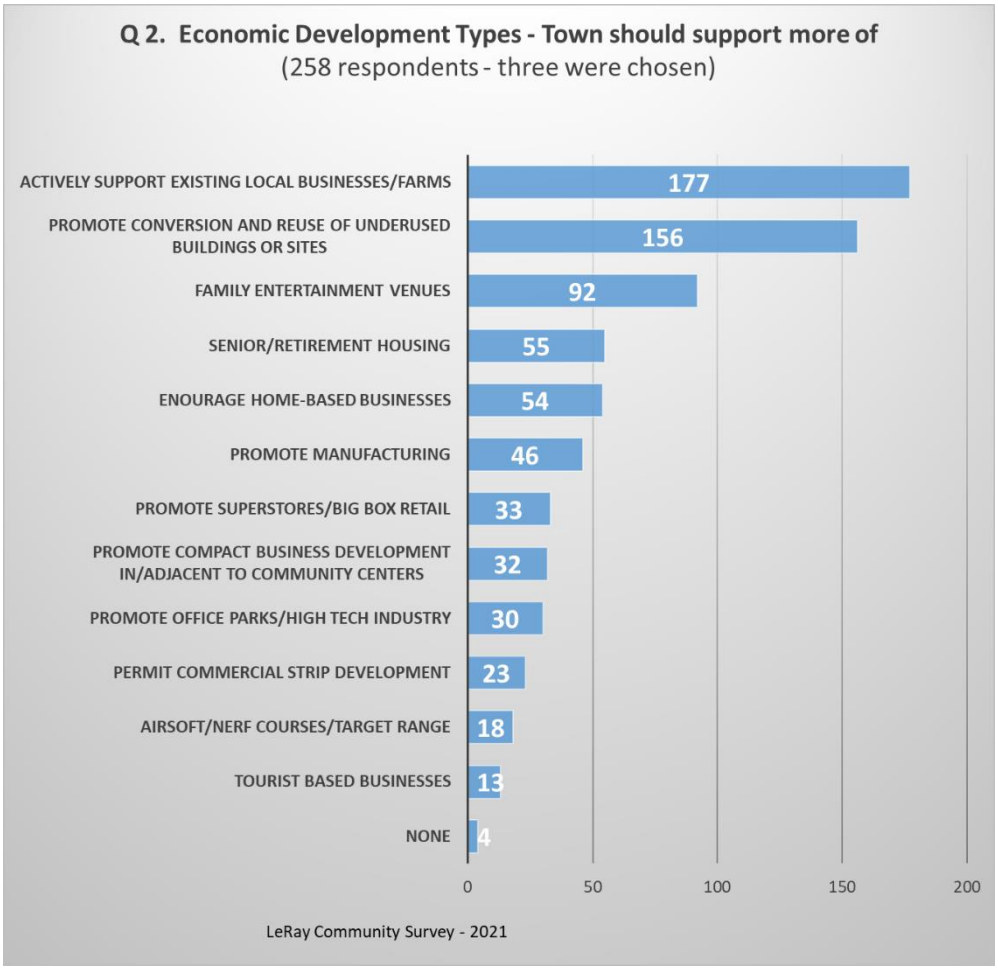


Support Existing Local Businesses/Farms with 177 out of 258 respondents. Second was Promote Conversion and Reuse of Underused Buildings or Sites with 60.5% of respondents (or 156 out of 258). Third was Family Entertainment Venues with 35.7% of respondents.

respondents choosing it. The third most chosen issue was Local Jobs/Economic Opportunities with 27.5% of respondents choosing it.

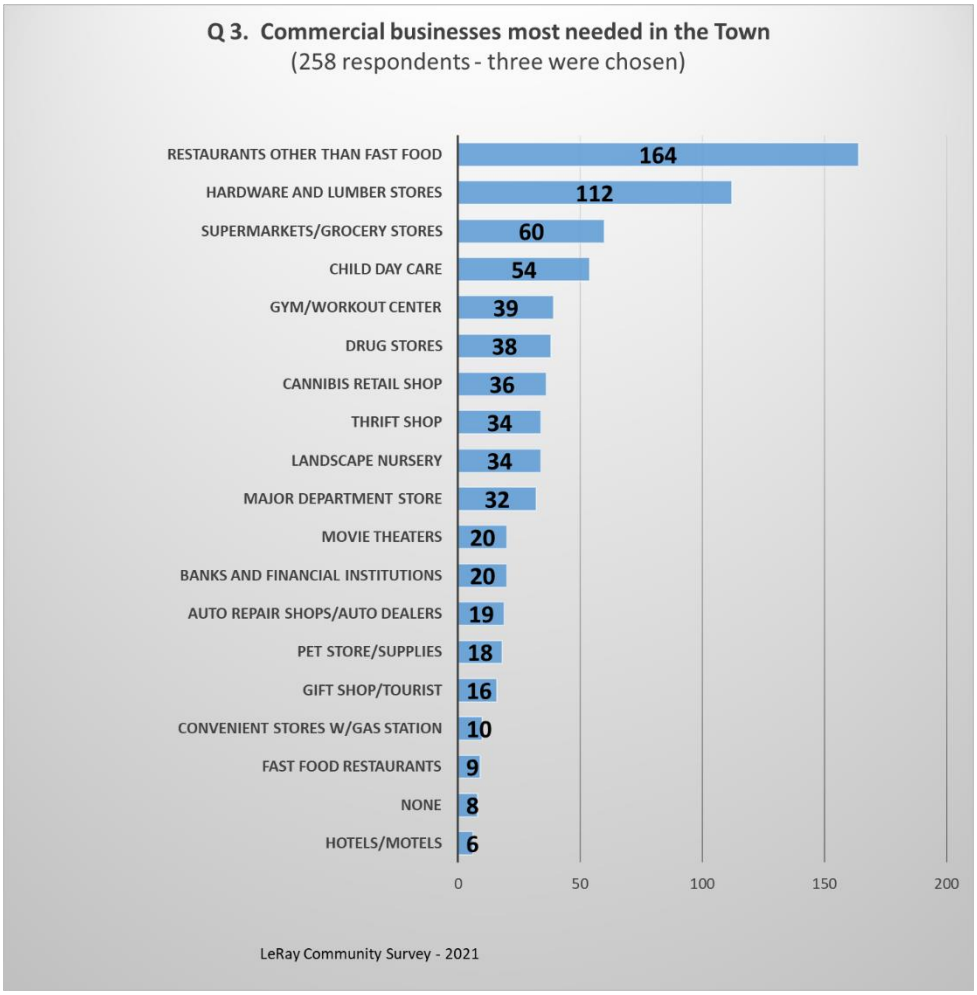
Other issues of greatest concern not listed/respondent clarifications:

- Road maintenance should be enhanced, including limiting where snow builds up
- Beautification of streets within villages (including sidewalks and street trees needed)
- More solar and wind restrictions/regulations
- More family activities locations desired



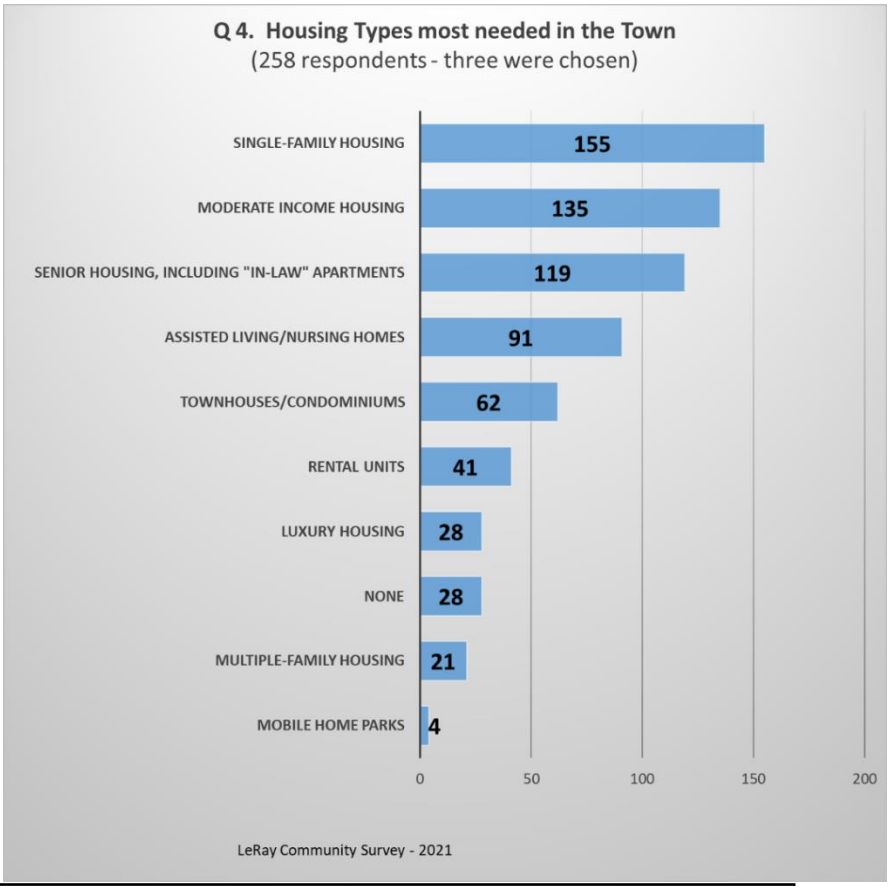
Respondents to Question 2 followed-up with what Economic Types the Town should support more of and three were chosen. Nearly seventy percent (68.6%) felt the Town should Actively

Question 3 asked what Commercial Businesses were most needed in the Town. Restaurants Other Than Fast Food was most chosen, with 63.6% of respondents or 164 out of 258. Second most chosen were Hardware and Lumber Stores with 43.4% of respondents or 112 out of 258. Third most chosen were Supermarkets/Grocery Stores with 23.3% of respondents or 60 out of 258.



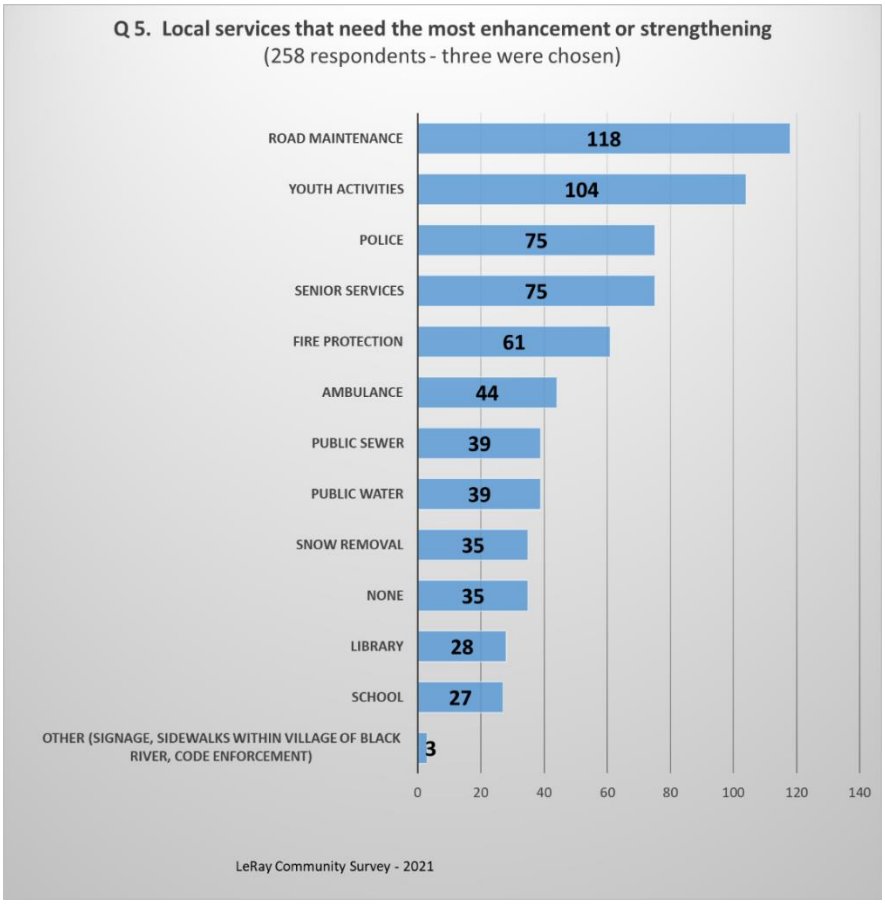
Other Local Services Needed responses:

- With the increase in vehicular traffic, speeds and destinations, comes the need for additional pedestrian circulation (sidewalks)
- Community events areas should be added
- Public transit options should be examined for potential provision within/through the Town.
- Property refurbishment should be required/encouraged
- Traffic circulation improvements should be identified and provided as costs permit.
- Enhance the schools



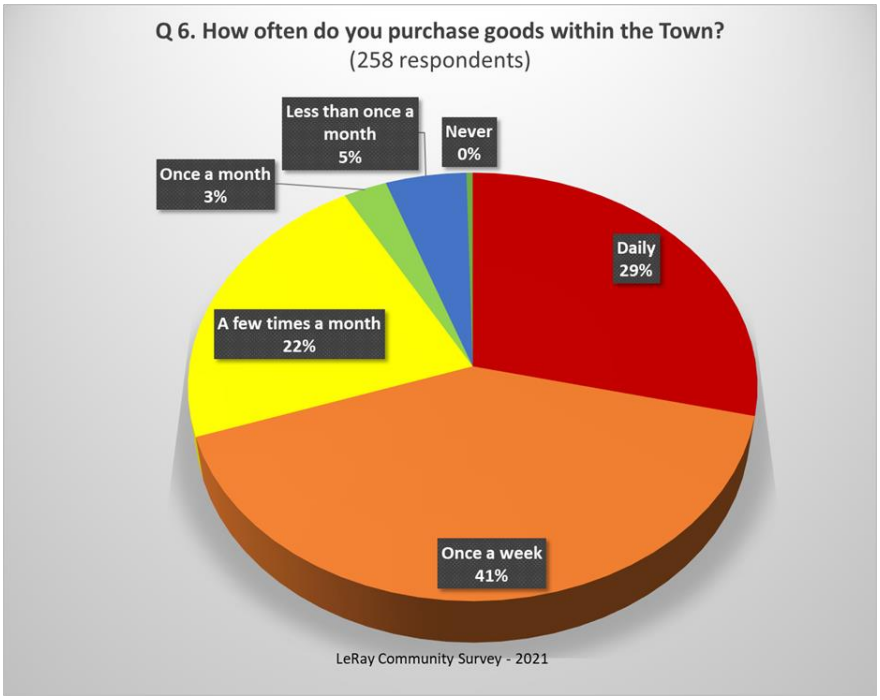
Question 4 dealt with Housing Types most needed in the Town (three were chosen). While Single-Family Housing was most chosen with 60% of respondents, Moderate Income Housing ranked second with 52.3% of

respondents. Senior Housing, including In-Law apartments with 46.1% ranked third with respondents.

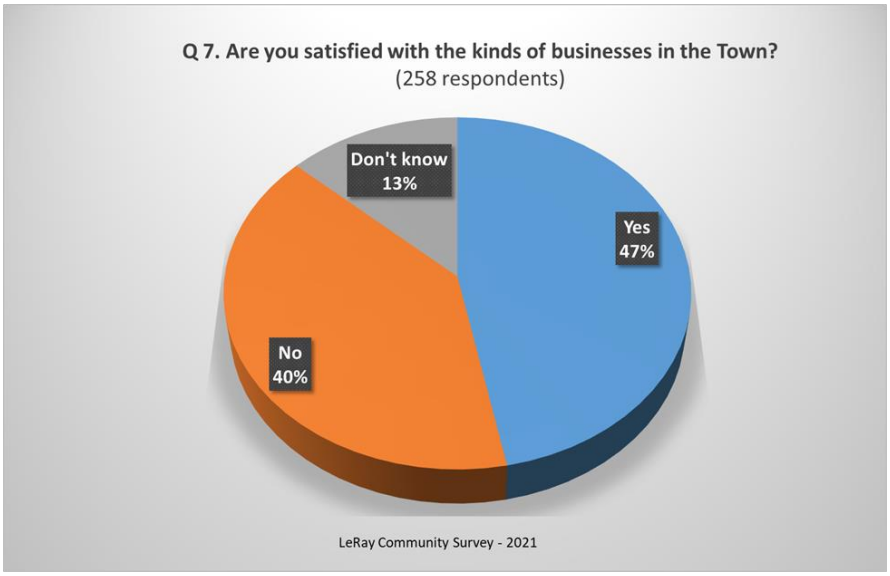


Question 5 asked what Local Services Need the Most Enhancement or Strengthening. Road Maintenance was the most chosen response by 45.7% of respondents. Youth Activities was a fairly close second, with 40.3% or respondents. Tied for third were the Police category and Senior Services, both chosen by 29% of respondents.

Shifting gears a bit, Question 6 asked How Often do you Purchase Goods within the Town. The largest percentage of respondents indicated Once a Week, at 41%, while the second largest group said Daily, at 29%. Both of these are good indicators that for 60% of residents (at least among respondents), businesses in the Town can provide daily and weekly needs to many. The third largest group indicated a few times a month at 22%, again indicating many business needs are provided locally.

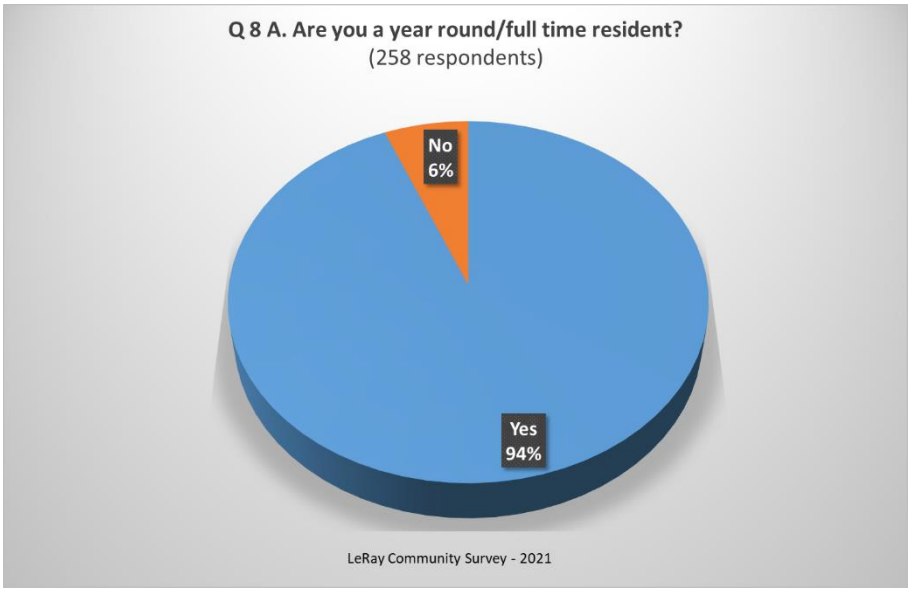


Question 7 asked Are you satisfied with the kinds of businesses in the Town? The largest percentage indicated Yes, at 47%. Second largest said No, at a 40% rate. However, 13% said Don't Know, so this group should be considered as well.

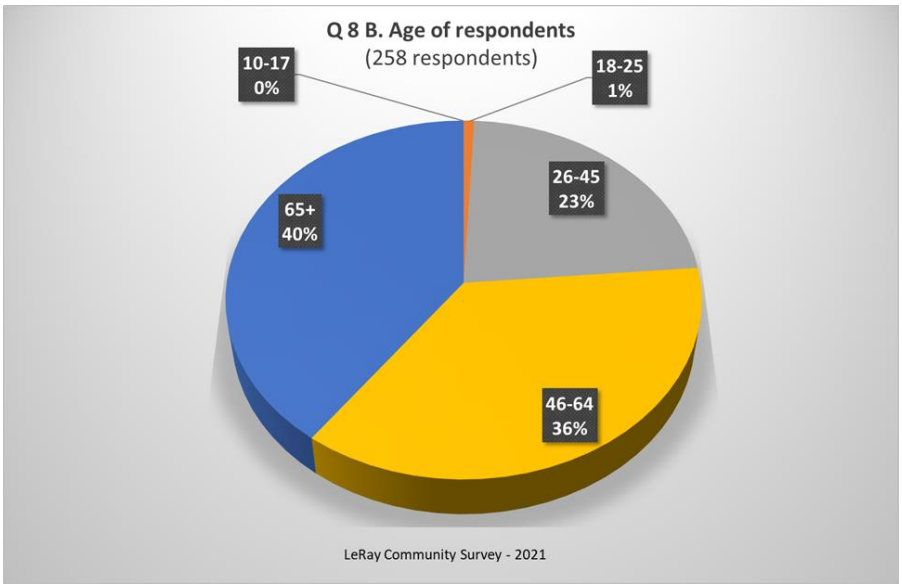


Question 8 was divided up into 5 questions as they dealt with survey respondent characteristics.

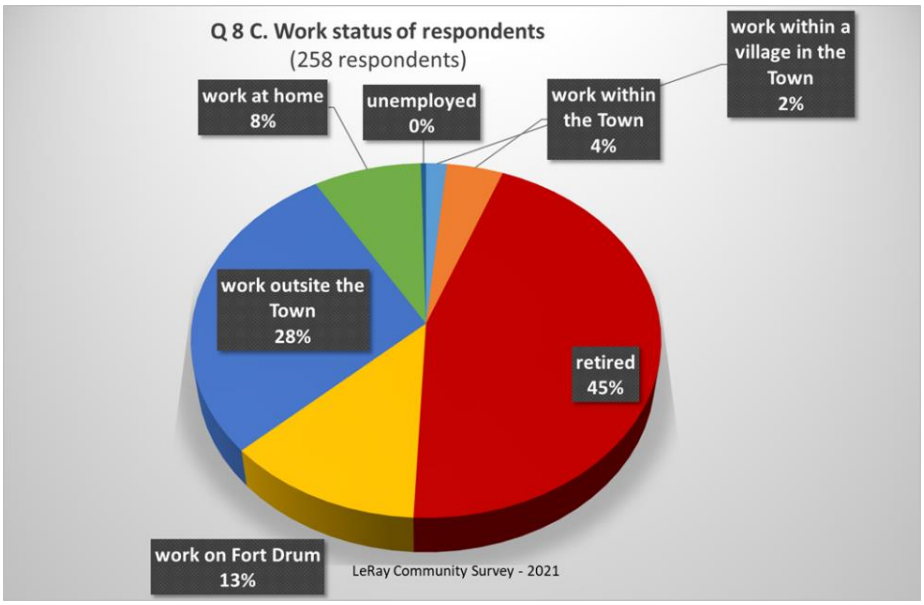
Question 8 A asked whether respondents were a year round/full time resident. Overwhelmingly, at 94% respondents said Yes. The other 6% said No.



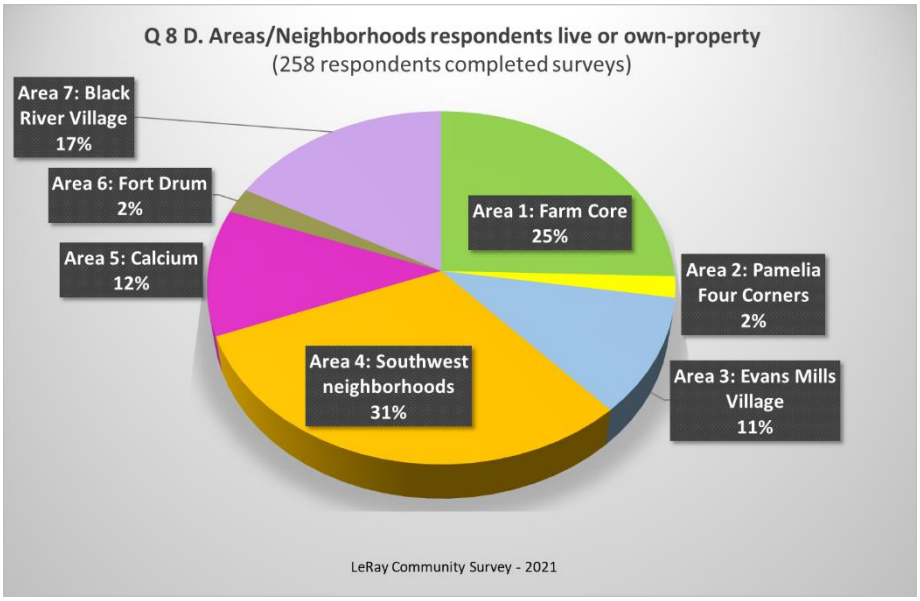
Question 8 B asked the age of respondents. The largest group were 65 and over with 40% of respondents.



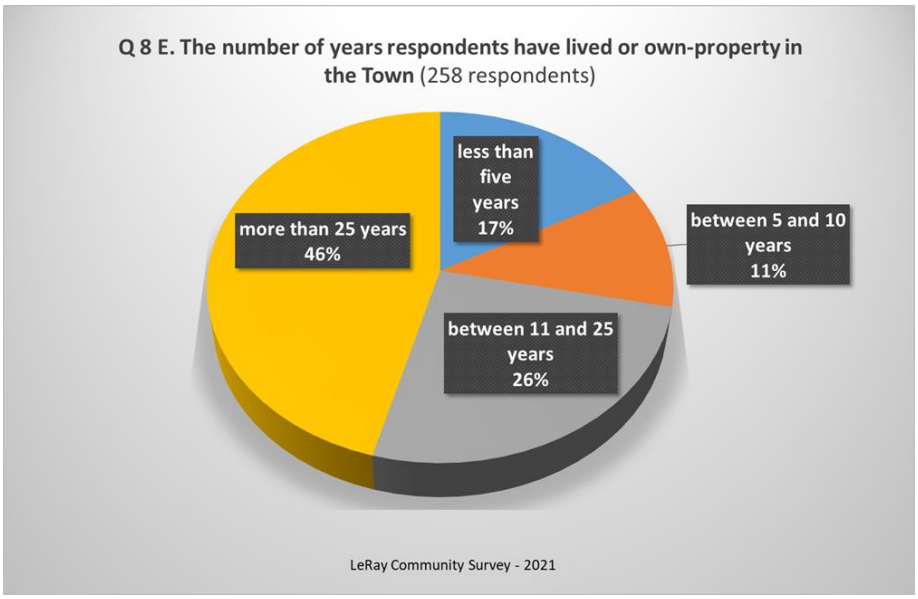
Question 8 C asked the work status of respondents. The largest segment were Retired, at 45% of respondents. The second largest were those who work outside the Town, at 28% of respondents. The third largest segment were those who work on Fort Drum, at 13%. The prevalence of those retired completing the survey means that they may have more free time to complete the survey, and typically retirees often have a deep interest in their locality of residence.



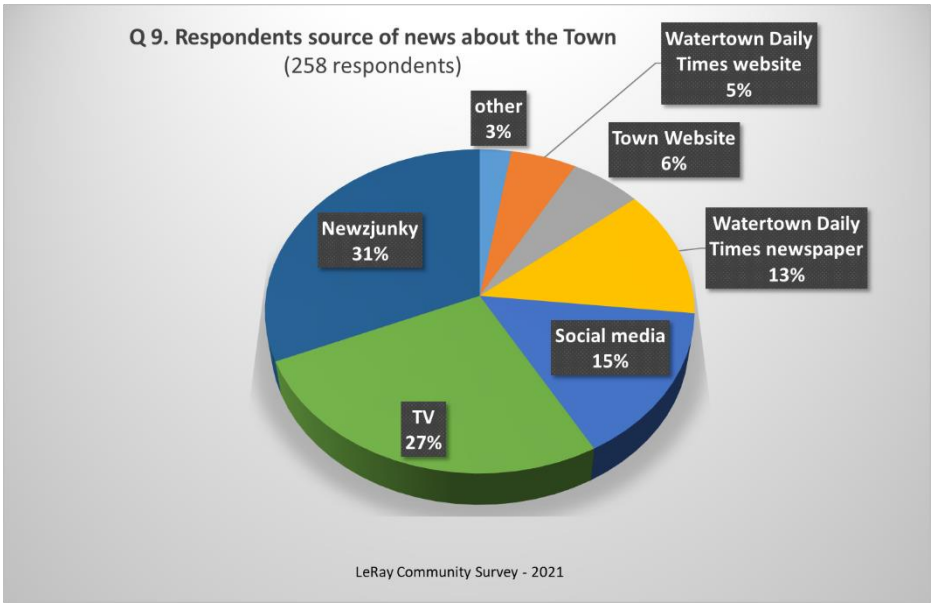
Question 8 D asked what areas of the Town or Neighborhoods respondents lived or own-property. Area 4: the Southwest Neighborhoods had the highest response to the survey with 31% of respondents. The second highest response was Area 1: Farm Core with 25% of respondents. Interestingly, Area 7: Black River Village had the third highest response at 17% of respondents. The very low response rate from Area 6: Fort Drum of 2%, with their high population compared to some other areas, may warrant reaching out to that population in terms of an additional public meeting, or some kind of other specific action. The other areas are more reflective of their relative population in terms of their response.



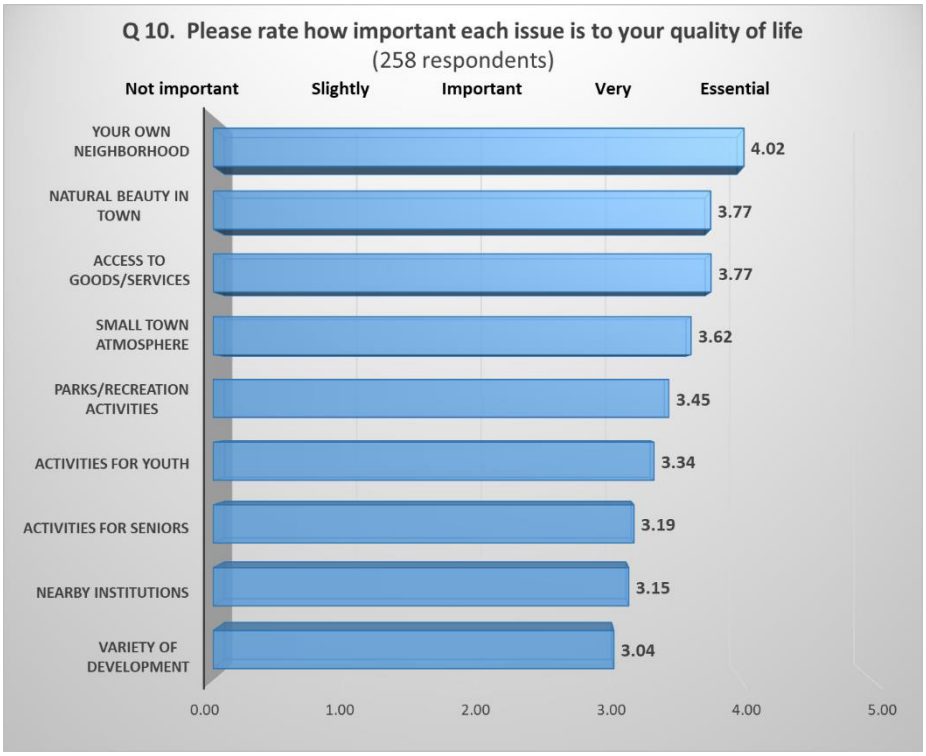
Question 8 E asked the number of years, respondents have lived or owned property. The largest segment was more than 25 years with 46% of respondents.



Question 9 asked respondents where they obtained their source of news about the Town.



Newzjunky was the largest segment with 31% of respondents. TV was the second largest at 27% of respondents. Social media was the third largest segment with 15% of respondents. Perhaps unexpectedly, was the Watertown Daily Times newspaper with 13% of respondents coming in at fourth. Although, 5% percent of respondents indicated Watertown Daily Times website, so perhaps adding the two would then put the paper and its online version at 20% of respondents.



Question 10 asked respondents to rate how important each issue is to their quality of life. Perhaps expectedly, Your Own Neighborhood rated highest with an average response of 4.02 on a scale where 1 is Not Important and 5 is Essential. Tied for second place were Natural Beauty in Town and Access to Goods/Services with an average response of 3.77 for both. The fourth highest rated average response was Small Town Atmosphere, with a rating of 3.62.

Questions 11 and 12 were open ended. Questin 11 asked respondents what they thought were the Towns greatest assets worth preserving/enhancing in their Neighborhood and Town-wide.

Q 11. Greatest Assets In Your Neighborhood:

- Natural beauty
- Open farm fields / open space
- Black River / Indian River views
- Parks / walking trails
- Rural life / small town atmosphere
- Quiet rural area
- Our neighbors
- Proximity to main commercial area
- Public utilities where available

Greatest Assets Town-wide:

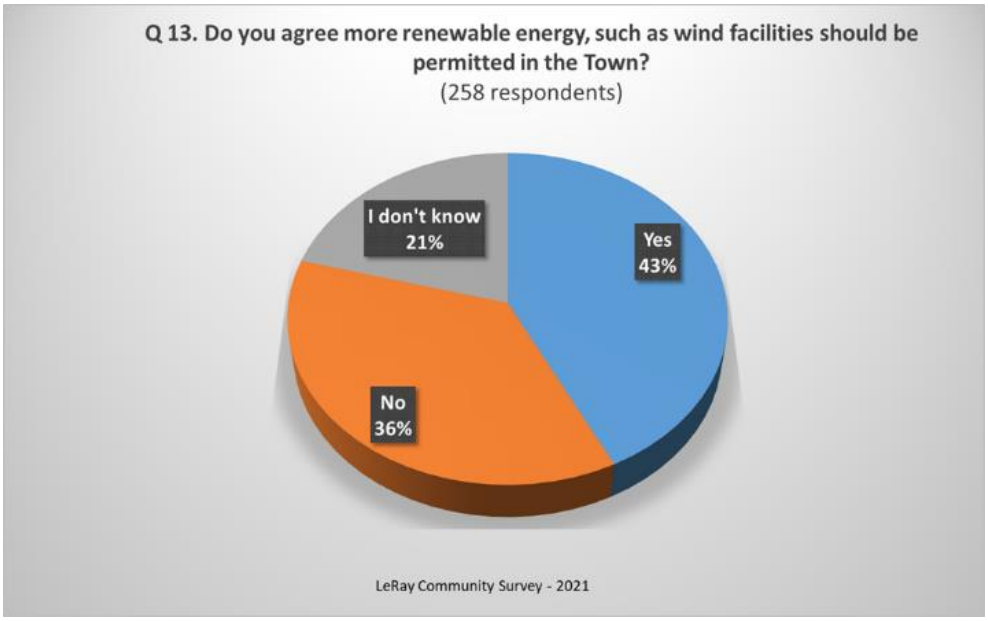
- Walking trails
- Scenic landscapes
- Farmlands
- Small town character
- Parks/forests

Question 12 asked respondents to list the Town's serious problems or deficiencies:

Q. 12 Serious problems in your neighborhood or Town wide:

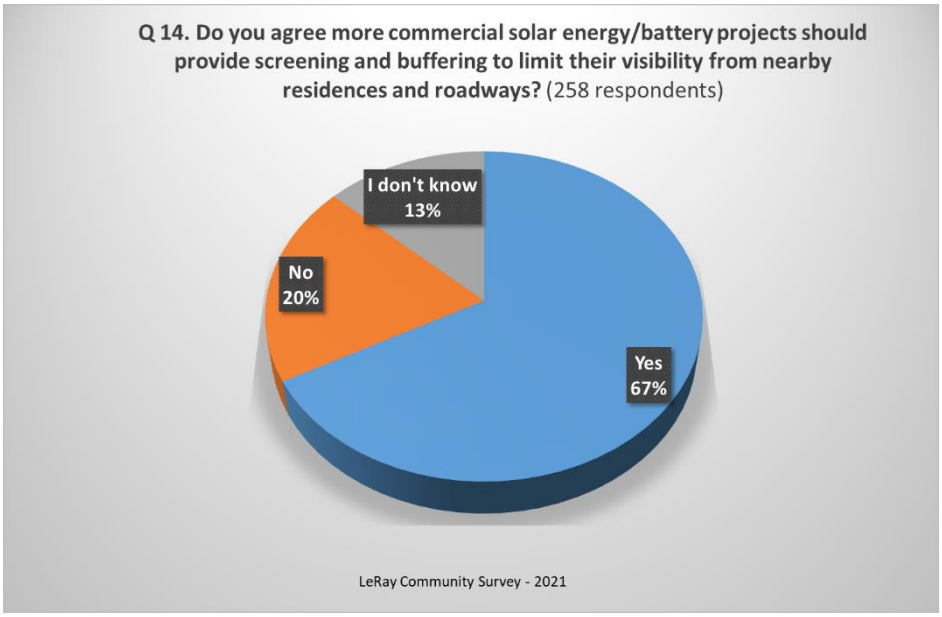
- Residential and commercial property upkeep.
- Zombie properties
- Road maintenance and service maintenance in some areas not keeping up
- Sidewalk maintenance in some areas not keeping up with demand\use
- Too much traffic
- Lack of internet in some areas of the town
- Excessive traffic and high speeds in some areas
- Lack of suitable bike / pedestrian areas, especially on main thoroughfares
- More locally based stores needed
- More housing/property maintenance suggested/enforced
- Too many motorized vehicles on trails
- Municipal water and sewer needed in some areas.
- Private roads should be taken over and preserved.
- Grocery shopping needed
- More grocery stores needed.
- More of both youth/senior activities needed.
- Need senior housing
- Removal or redevelopment of vacant buildings and run down properties needed

Question 13 dealt with renewable energy, specifically whether wind energy facilities should be permitted in the Town. The highest number of respondents answered Yes, at a rate of 43%. No was answered by 36% and 21% said I don't know.



This question was meant to gage respondents' general feeling about wind energy production, so further input should be obtained related to any specific area of the Town. Also, compatibility issues must be incorporated into any zoning decision related to neighborhood and larger impacts to neighboring communities and Fort Drum training and Wheeler Sack Army Airfield activities.

Question 14 asked respondents whether they agreed that commercial solar energy and battery projects should provide screening and buffering to limit their visibility from nearby residences and roadways. The highest response was Yes, with 67% of respondents. No came in second, with 20% of respondents, and I don't know was indicated by 13% of respondents.



Again, this question was meant to gage general respondents' opinions, and not meant to circumvent or alter compatibility steps in any certain area of the Town.

Town Strengths, Needs, and Opportunities

Strengths, Weaknesses, Opportunities and Areas that Need Attention can be vital components of the comprehensive planning process. They help community leaders identify specific assets/strengths, needs and opportunities for future development or capital projects. This process encourages local citizens and decision makers to brainstorm ideas about existing conditions and identify methods to improve the community. This analysis/discussion is designed to encourage the Town to think about:

- ✓ Where it has been?
- ✓ Where is it now?
- ✓ Where does it want to be in the future?
- ✓ How do they want to get there?

Initiated at the public open house meeting, the LeRay Comprehensive Plan committee then completed a Brainstorm Issues session of the Towns Strengths, Weaknesses, Opportunities/Local Priorities, and Areas that Need Attention exercise after the community input survey occurred during the planning process. The broad range of issues identified should be used within the Plan Update and any future zoning update processes. The issues can guide the direction of some key points in the plan and illustrate priorities applied to grant requests or funding decisions.

The Brainstorm Issue results can be found on the following two pages.

ISSUE IDENTIFICATION

STRENGTH - Something that makes the Town standout when compared to other communities. Something that makes you proud to call the LeRay home. A strength can be a physical asset, a program, an environmental condition or an impression or feeling.

WEAKNESS – Opposite of a strength. Problem that needs to be addressed, or limiting factor present in a community.

OPPORTUNITY – Something that could be done to improve the Town, or items that would make the community more complete or provide enhancement.

AREAS THAT NEED ATTENTION - Could be anything that warrants focused attention and/or resources to maintain, enhance or foster success of the Town.

TOWN OF LERAY	STRENGTHS	WEAKNESSES
BROADBAND	Broadband where available	Broadband gaps in some areas
BUSINESS	Established US Rte 11 commercial corridor - Job opportunities	Pedestrian connectivity is sporadic among businesses
	Close Proximity to Canada, 1000 Islands, and the Adirondacks	
FORT DRUM	Fort Drum - Economic Impact and Relationships	Relatively high cost of housing - related to Fort Drum: Basic Allowance Housing
	Fort Drum: Noise Education - complaint line	Close proximity to some Fort Drum training activities (periodic noise)
JOBS/RETAIL	Retail diversity/locations	Lack of entertainment/activity destinations
HEALTH CARE	Health care availability - locally and regionally	Senior access to health care - public transit needed
HOUSING	Diverse housing types to own/rent	Lack of affordable housing
RECREATION	Recreation programs (good facilities exist) allowing for more youth opportunities	Need for additional community gathering spaces - outside villages/hamlets
ROADWAYS	Road maintenance/Snow removal	
SERVICES	Regional transportation connectivity	Public transportation - lack of it requires car ownership or taxi use
		Soil limitations for individual septic use
SIDEWALKS/TRAILS	Trails - Black River Trail, Calcium Trail	Lack of pedestrian sidewalks/bike routes
SOLAR ENERGY	Renewable energy prevalent countywide (hyrdo)	Unscreened commercial solar energy facilties - often viewed as an industrial use
	Town has large tracts of vacant undeveloped land (non-agricultural)	Some areas may not have adequate daytime grid capacity or nearby substation
TAXES	Sales tax revenue	Perception of local taxes is high while Town tax rate is low
TOWN	Small Town Character	Town/Village relations strained - lack of community cohesion
TRAFFIC	Traffic levels - favorable for businesses	Lack of multi-modal transportation
OTHER		Potential radon in some areas
TOP THREE	1) Fort Drum - Economic Impact; 2) Route 11 Corridor Retail Diversity, Location, and Jobs; 3) Financial Strength of the Town	1) Town/Village relations strained - lack of community cohesion; 2) Limited public transportation options (regional issue); 3) Limited affordable housing units.

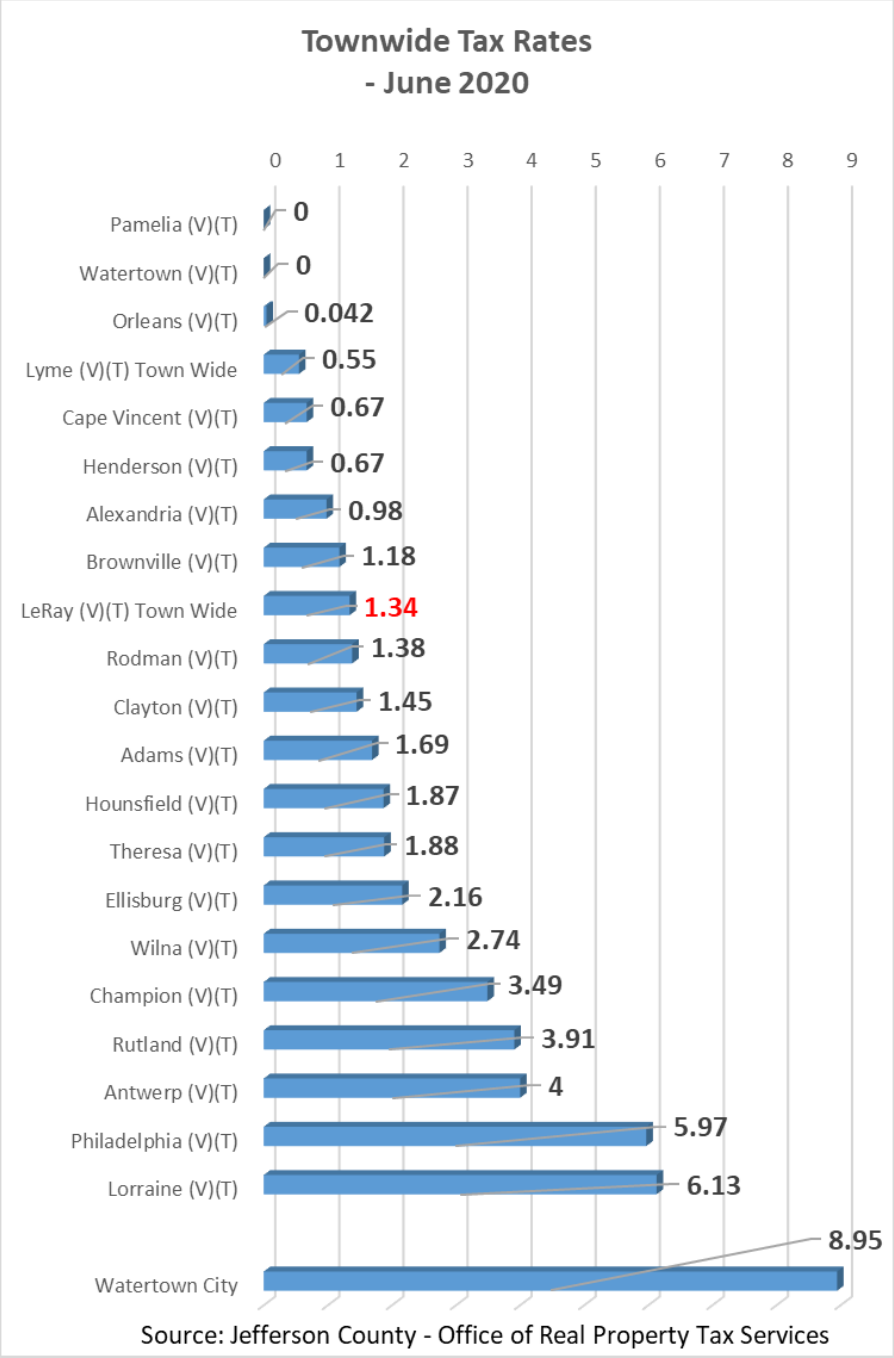
TOWN OF LERAY	OPPORTUNITIES/LOCAL PRIORITIES	AREAS THAT NEED ATTENTION
BROADBAND	Seek funding sources to expand broadband to close gaps	Broadband gaps should be identified (may have been through DANC Study)
BUSINESS	Consider coordinating incentives for development/streamline development process	Jefferson County Economic Development (JCED) - incentivize job growth in the Town
	Commercial and residential infill within hamlets and Villages in Town	Zoning amendment areas - (some Residential, Mixed Use, Commercial areas need reconsideration where businesses may exist or be appropriate)
FORT DRUM	Enhancing sidewalk connections and transit to and from Fort Drum	Transit connection to Fort Drum should be reestablished
		Route 11 traffic heavy when Fort Drum lets out (traffic light timing may be needed)
JOBS/RETAIL	Town desire to keep spending local	Town seeks more sit-down (full service) restaurants and hardware store type uses
HEALTH CARE		Affordable transit options should be explored to expand services
HOUSING	Senior/retirement community housing needed (market rate and subsidized)	High rental costs (may be related to Base Allowable Housing rate)
RECREATION	Outdoor activities (need more options/areas)	Youth programs - expansion needed
ROADWAYS	Senior mobility - public transit needed	
SERVICES	Expand technology in the area (railroads, fiber optic, broadband)	Municipal sewer/water capacity: pumps running excessively, need another water source
	Examine pros and cons of dissolution of Villages	Consider municipal sewer services where private septic system failure proliferates
SIDEWALKS/TRAILS	Within the Route 11 Corridor, easements for trails/sidewalks exist - providing the sidewalks would expand pedestrian access and limit the need for automobiles	Consider motorized trail expansion (atv's on public roads) only where needed to link established trail systems
SOLAR ENERGY	Landowner income may make current use viable (such as for continual family owned land or farms)	Solar farms - consider not allowing commercial solar facilities everywhere
	Manage solar farm areas (establish larger setback in commercial areas)	Renewable energy - such as wind and solar need to ensure regulations meet community intent
TAXES	Low Town tax rate (real estate taxes) compared to other towns (9th lowest out of 21 towns)	
TOWN	Village/Town cooperation opportunities (Black River & Evans Mills) also neighboring Town cooperation	Evans Mills centennial celebration, Blak River Events, Evans Mills Speedway races) Need additional events to bring community members together
TRAFFIC	Mitigate congestion in problem areas with signage/directional enhancements	Certain traffic patterns (Wal Mart entrance - Johnson Rd) should be examined for safety and more efficient signage/signalization
OTHER	Need to adopt an unsafe buildings law, addressing vacant/unmaintained/hazardous structures.	
TOP THREE	1) Village/Town cooperation opportunities, also with neighboring Towns; 2) Outdoor recreation activities, trails and sidewalks; 3) Senior/retirement community housing needed	1) Examine rezoning sections of the Town, and consider Fort Drum Compatibility; 2) Foster additional job growth in the Town such as offices and light industry 3) Develop a common avenue for notification of town and village events, add more;

After the brainstorming exercise was completed, the committee and staff decided drafting the chapters of the plan would be the logical next step.

Tax Rate Comparison

LeRay's tax rate compares favorably to many other Jefferson County towns, villages, and the City of Watertown. The bar chart shows LeRay's townwide tax rate in 2020 at 1.34 per $1,000 assessed taxable property value. Perhaps special district fees may be impacting overall property tax bills in some areas of the Town not attributable to the LeRay townwide tax rate.

Of course, a municipality's tax rate is only part of a property tax bill in addition to the special districts. The equalization rate also helps determine one's tax liability for the year. LeRay's equalization rate as of 2020 was at 100%.



Contents

Trends Introduction

As LeRay considers its future, one of the steps in the process is to track recent demographic, housing and land use trends. This chapter examines them to gain an understanding of possible future needs, providing a foundation for subsequent components of the Plan.

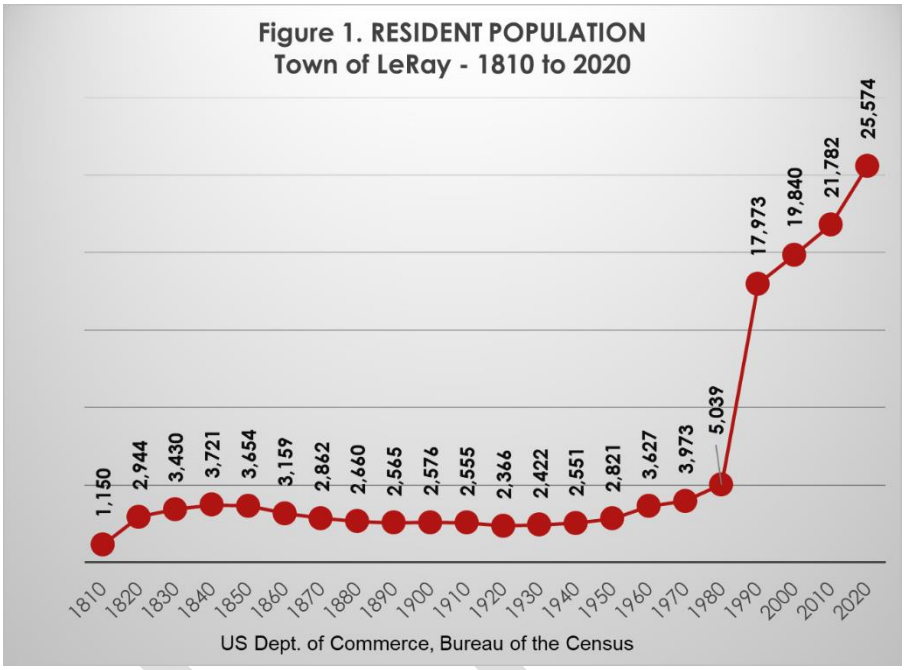
Resident Population

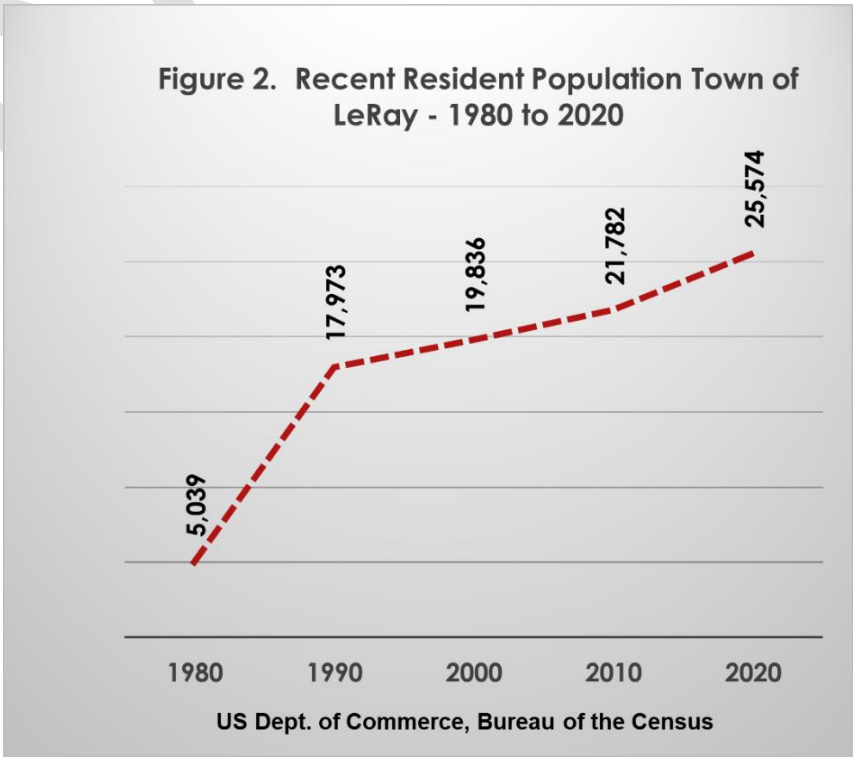
According to the US Census Bureau, LeRay's population increased by 2,124% from 1810 to 2020, with 1,150 residents in 1810, to 25,574 residents in 2020. As seen in Figure 1, for many years the Town population didn't increase very much past an early peak in 1840 until Fort Drum's 10th Mountain Division's establishment in 1984. From 1980 to 1990, the Town population more than tripled. Another increase, of 17.4% occurred between 2010 and 2020, when Fort Drum expanded its troop levels again.

Recent Town population trends are shown in Figure 2 which illustrates a 408% increase in population from 1980 to 2020. This recent growth over the past four decades reflects the current residential and commercial expansion seen in several areas of the Town, notably along US Route 11, and pockets of suburban residential along NYS Route 3.

As the region's and Town's largest employer, Fort Drum's troop and civilian employment levels continue to influence the Town and its communities greatly, in terms of residents, businesses, marketability, traffic levels and source of community pride.

This is further illustrated by Figure 3, Population Percentage by Area within the Town. The Fort Drum census designated





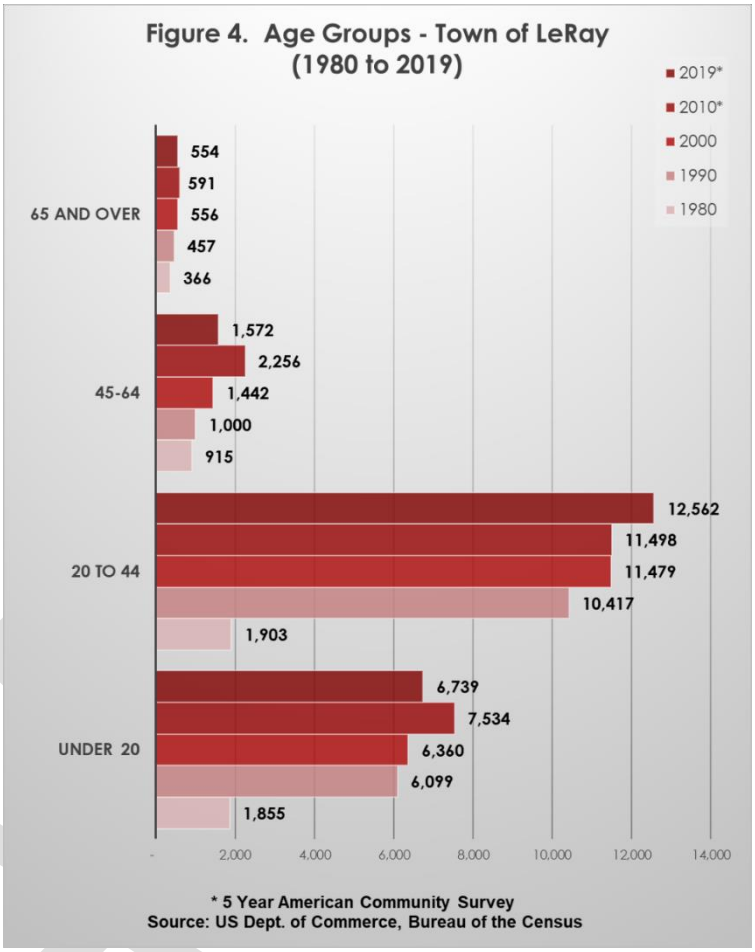
place (CDP) comprised 62% of the population within the Town of LeRay in 2020. The second largest segment of population is the rest of the Town, outside the CDPs and Villages comprising 18% of population. A census designated place is a concentration of population identified by the United States Census Bureau for statistical purposes. CDPs are delineated for each decennial census as the statistical counterparts of incorporated places, such as cities, towns, and villages.

One of the major indicators of future community growth besides employment change is the breakdown of age groups over time. When individuals of reproductive age dominate in number, growth is more likely. Conversely, as the population ages, growth rates can be expected to decline. Important factors also include birth and death rates, as well as in-migration and out-migration patterns.

Age Groups

Figure 4 illustrates LeRay's Town Age Groups as population increased significantly since 1980. LeRay experienced significant increases in those under the age of 45, primarily due to the installment of the 10th Mountain Division at Fort Drum in 1984, and then another expansion of troop levels in 2005/2006.

Contrary to National trends, the Town still has a fairly steady number of youths through less than middle age population, while the older age groups are not increasing in proportion like more typical communities are. If Fort Drum military or civilian personnel changes markedly, up or down, it is expected that these population levels would shift accordingly.



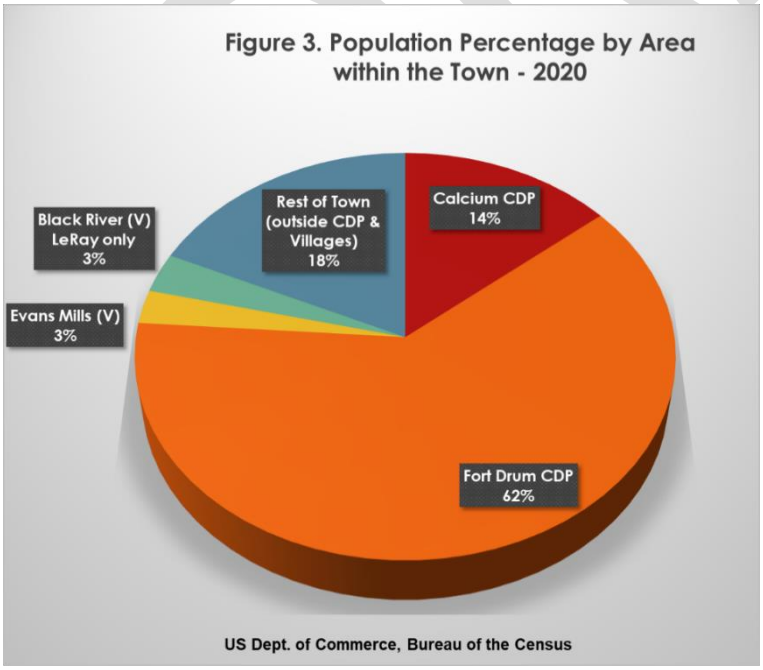
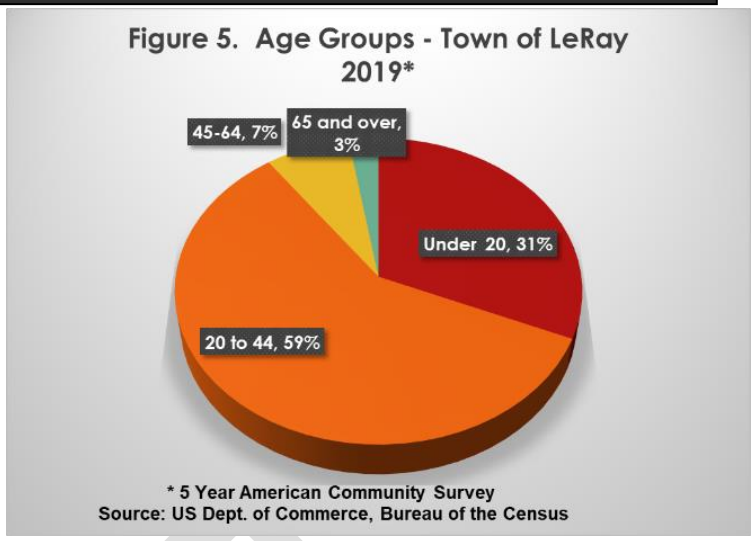
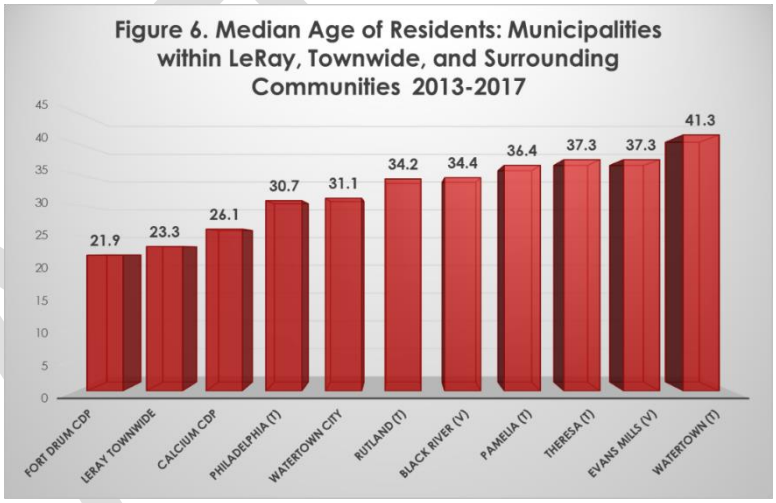


Figure 5 illustrates the most recent age groups and how they compare to each other. Estimates show those in the under 20 age group comprised 31% of the population in 2019. As expected, the 20 to 44 age group made up the largest segment, at 59%. The rest were the 45-64 age group consisting of 7% of the population, with only 3% being age 65 and over. Some of the reason that the 65 and over age group may be low, could be the Town's lack of retirement/senior housing.



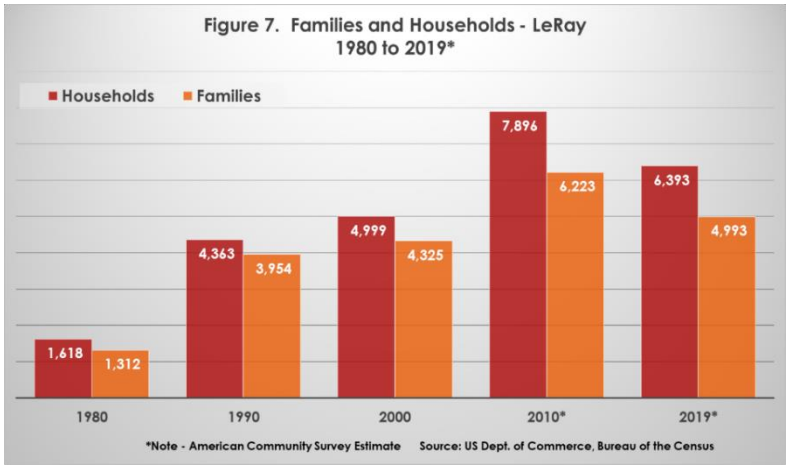
Median Age of Residents

Figure 6 on the following page, shows Fort Drum CDP, as expected, had the lowest median age (at 21.9) out of the various communities and nearby Towns as estimated by the American Community Survey from 2013 to 2017. The population on Fort Drum lowers the median age Town-wide because it is not much higher at 23.3. Calcium CDP probably feels this influence with a number of its residents with its 26.1 median age. Philadelphia also may be influenced somewhat at 30.7 as the City of Watertown could as well at 31.1. However, Rutland (34.2), Black River (34.4), and Pamelia (36.4) seem to be less influenced by their proximity to Fort Drum in terms of median age, however, it is noteworthy to see the variety among the nearby municipalities.



Families and Households

A family is defined by the US Census Bureau as a group of two or more people related by birth, marriage, or adoption and residing together. A



household is defined as all people who occupy a housing unit (related or unrelated).

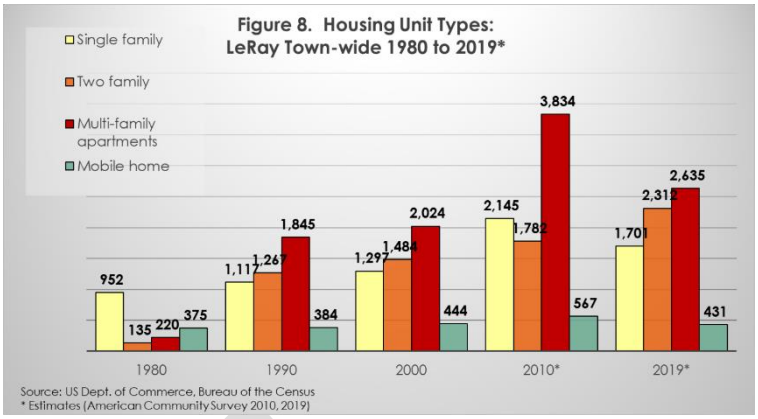
According to the US Census Bureau, the number of households Town-wide increased steadily from 1980 to 2010 (Figure 6), increasing by 388%. While the number of families also increased, its rate was 374%. A major portion of the spike in households and families is attributable to the establishment of the 10th Mountain Division at Fort Drum in 1984, and then another increase in military personnel and civilian employees in 2005/2006.

Similarly, the decline that occurred between 2010 and 2019 was largely due to a more recent decrease in military personnel and civilians at Fort Drum during the time period as Figure 7 indicates.

Housing Types

Housing unit and type trends can help a community understand predominant housing as well as the nature of growth or decline that may have occurred historically.

As Figure 8 illustrates, LeRay's housing types have changed drastically since 1980, increasing by 321%. What was once a predominantly single family residential town, has increased in all categories. The highest rate of increase, though has been in the duplex (increasing by 1,613%) and multi-family categories which increased by 1,098% during the time period. Single family units increased by 79%, while mobile homes increased by only 15% from 1980 to 2019.



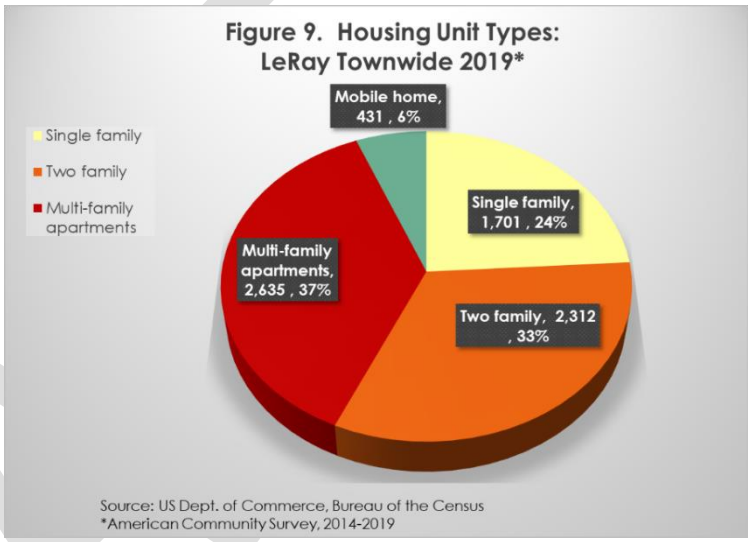
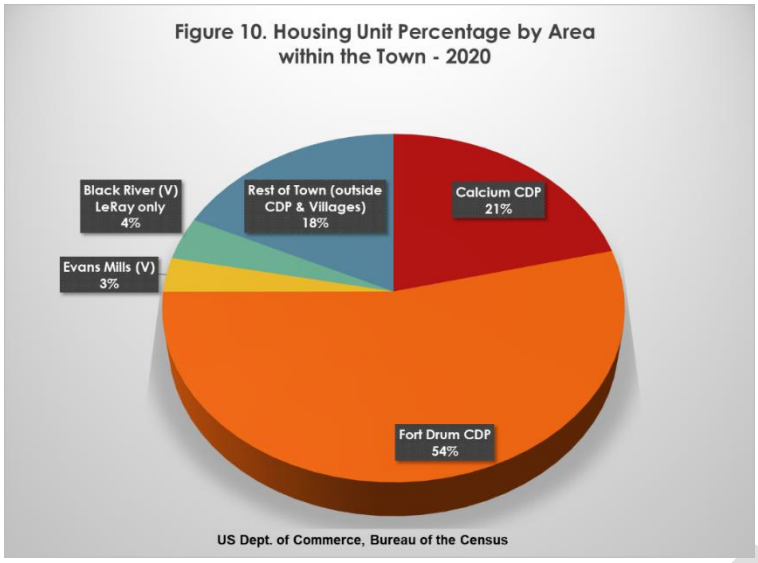


Figure 9 illustrates the percentage of each type of housing type throughout the town estimated in 2019. It shows d uplexes now comprise 33% of the Town and multi-family with 37% of units in the Town, which together make up more 70% of the housing types Town-wide.

Housing Units by Area

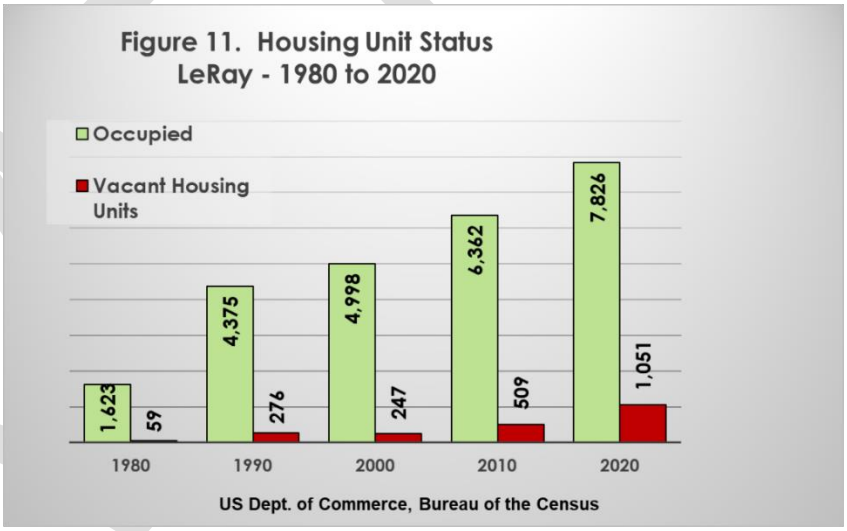
Figure 10 illustrates the total housing units by area throughout the Town. As expected, Fort Drum comprises more than half of the housing units, making up 54% alone. Calcium makes up another 21% of the housing units Town-wide. Perhaps surprisingly, only 18% comprise the rest of the Town, not within Fort Drum, or any other municipality.



acreage which has remained relatively steady.

Housing Status

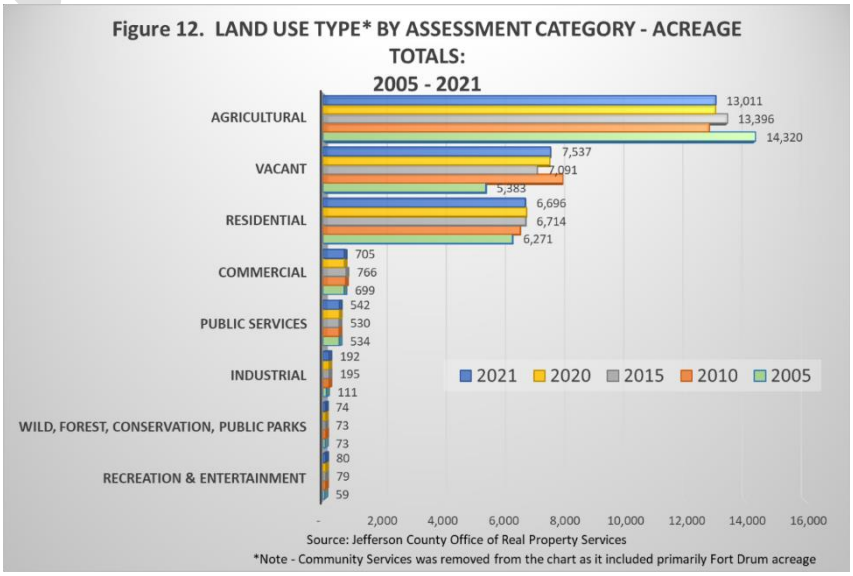
LeRay, as discussed previously, experienced significant increases in housing units from 1980 to 2020. Figure 11 also illustrates the number of occupied units, experienced the largest relative increase from 1980 to 1990. However, each decade since has felt increases in occupied units and vacant units. This is noteworthy even with a drop in troop levels during the past few years.



Land Use by Assessment

The Town has undergone several land use trends during the past 16 years as Figure 12 illustrates. By acreage, land assessed as agricultural has declined while vacant land has increased over the time period. Commercial land has fluctuated and industrial land has increased.

These changes have resulted in an Agricultural land decline from 52% of the Town's acreage in 2005, to now 45.1% in 2021. Vacant land increased from 20% in 2005, to now 26.1% in 2021. Residential is 23.2% and Commercial land is 2.4% by



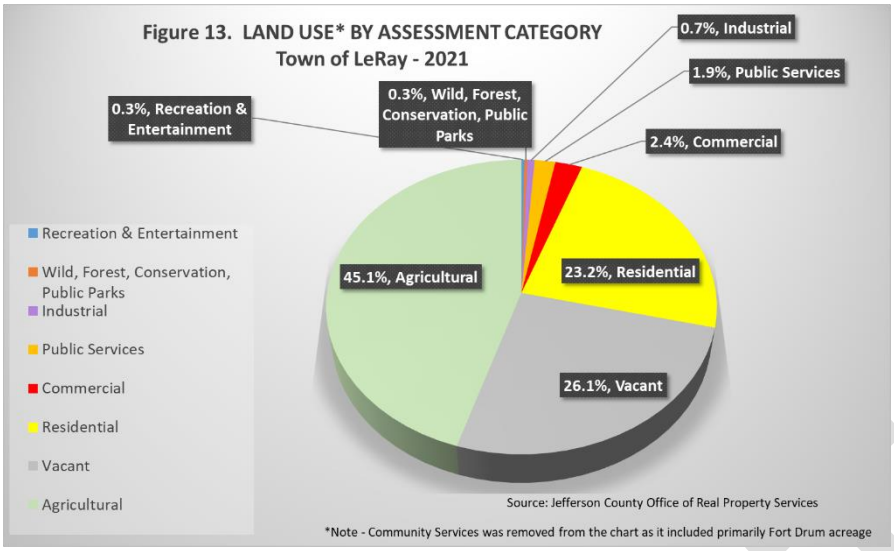
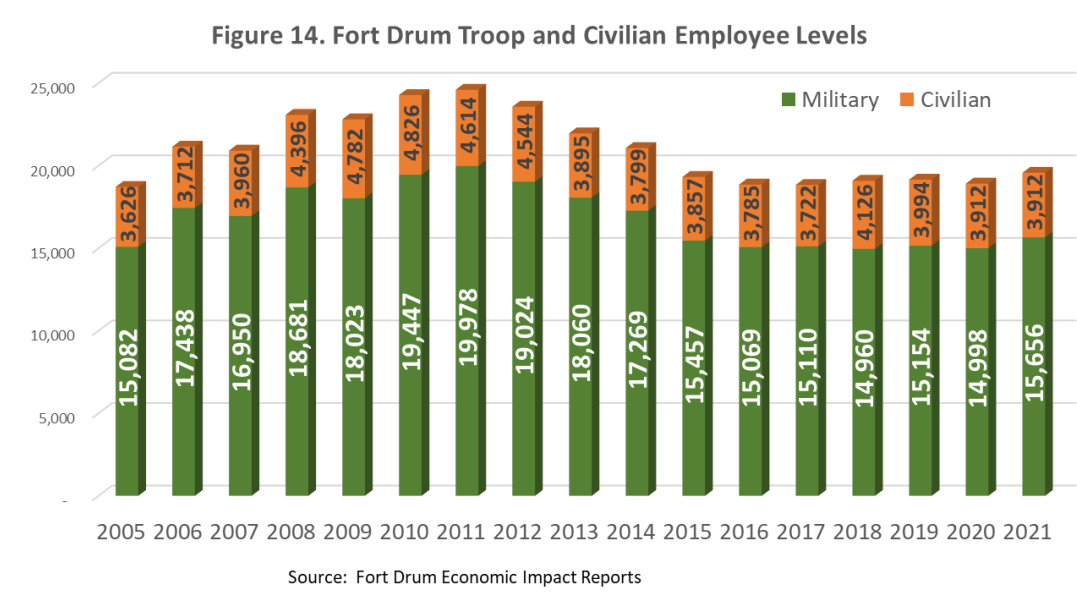


Figure 13 illustrates the percentage of each land use category by acreage as of 2021. Agricultural land use is still the greatest percentage at 45.1%, but has declined by 1,309 acres over the time period as Figure 12 shows.

Vacant land increased from 2015 to 2021, and now makes up 26.1% some was designated on Fort Drum. Vacant land is defined as property that is not in use, is in temporary use, or lacks permanent improvement. Residential land was steady from 2005 to 2021 and made up 23.2% in 2021.

Fort Drum Troop and Civilian Employee Levels

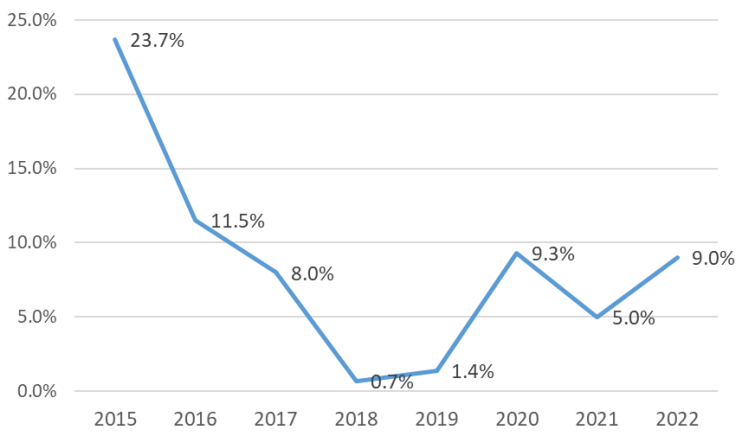
As one can see from the demographic, housing, land use, and in the next chapter, economic trends, Fort Drum Troop and Civilian Employees have influenced the Town of LeRay and Jefferson County for decades. Most evident is when the troop and/or civilian employee levels increase or decrease (as well as during deployments), one can see evidence of direct and indirect spending changes. Therefore, due to the size and scope of Fort Drum personnel and related expenditures since the 10th Mountain Division re-activation in 1984 the local and regional economy will continue to be linked.



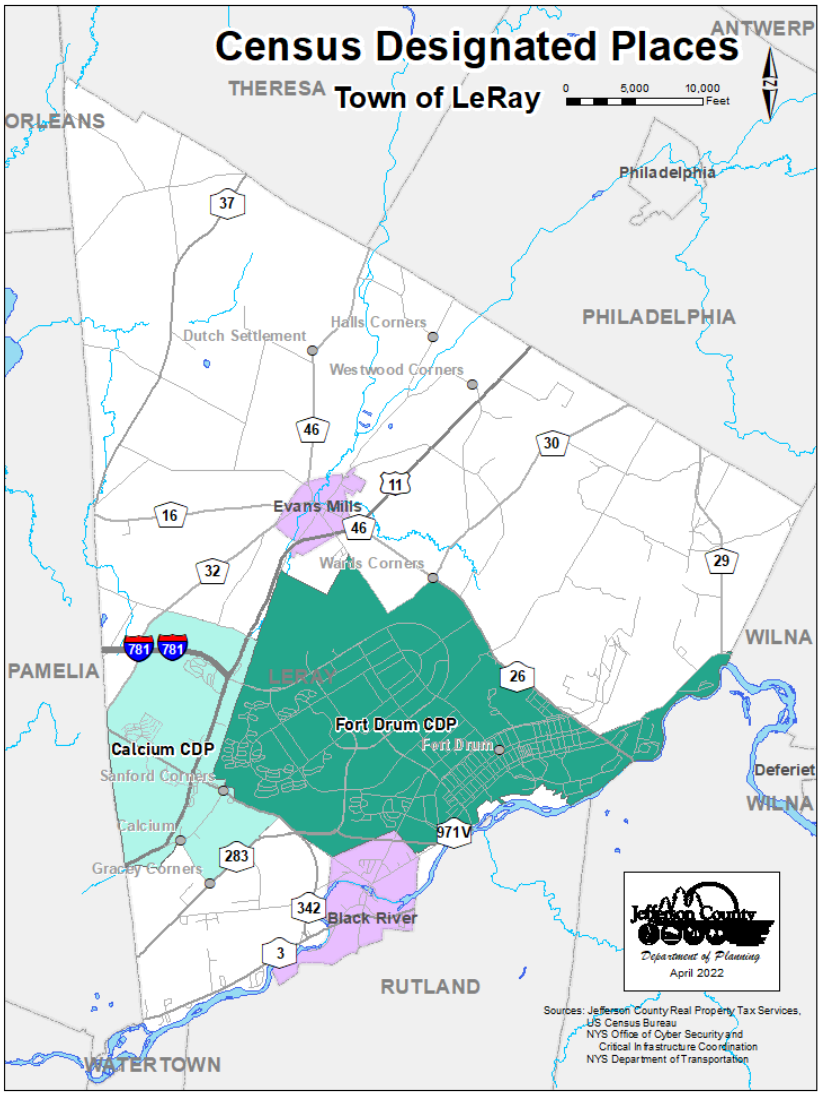
Percent Deployed

Fort Drum soldiers deploy at various times and for durations that may not always be consistent. These can fluctuate throughout the course of the year, depending on where in the world needs may arise. Quarterly deployment levels have been averaged each year by Fort Drum to calibrate the Fort Drum Economic Impact Model and to use as a general guide for trend discussion purposes.

Figure 15: Annual average - percent Deployed *
Fort Drum: FFY 2015 - 2022



*Note: quarterly variations not shown.
Source: Fort Drum Economic Impact Reports/FD Quick Facts



Contents

Introduction

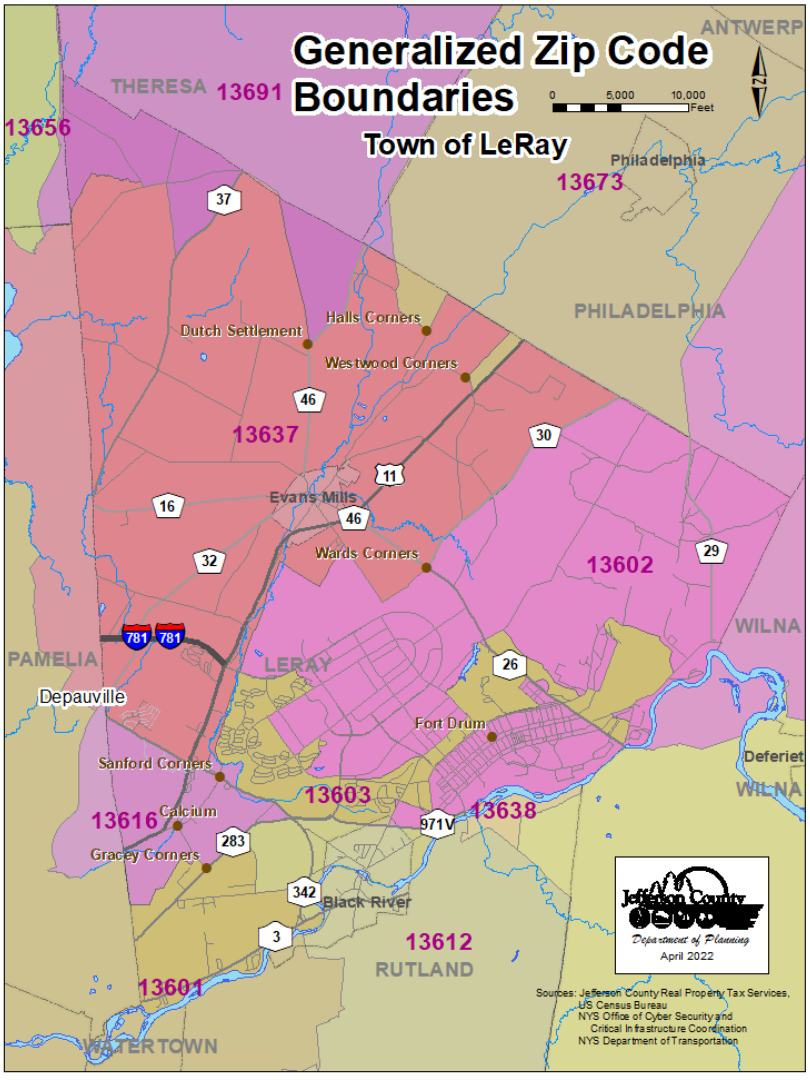
Economic development is a priority within this Comprehensive Plan. Economic development involves many facets of the community, from parks and trails, technology infrastructure, labor supply, and leadership. The Town and its partners must nurture many of these local aspects in order to maintain existing businesses, generate a steady workforce, and foster economic ventures.

The next few chapters of this plan outline current conditions and priorities for maintaining transportation assets, acknowledging recreational opportunities and public facilities, supporting a reliable infrastructure system, preserving natural resources, and developing land efficiently, profitably, and responsibly.

All of these pieces should fit together to form a strategy that will lead to a vibrant, enduring local economy. This chapter outlines several economic trends related to economic vitality: number of businesses, employment levels, payroll, household income, resident occupations, employment by industry by zip code and local labor force trends.

Zip Code Areas

The zip code map illustrates generalized zip code delivery areas that the US Postal Service uses within the Town of LeRay. The



Census Bureau publishes business patterns by zip code annually, with information about the number of businesses, payroll, and employment levels. The following pages summarize the information for the zip codes that coincide the most with the Town, Evans Mills (13637), Fort Drum (13602), Calcium (13616) and Black River (13612).

Of particular note, data for the number of paid employees is collected in March of each year. Other data such as household income and labor force trends were also examined by zip code.

Businesses by Zip Code

According to the Census Bureau, the number of businesses in overall LeRay zip code areas outside Fort Drum increased overall by 53% from 2005 to 2020. However, businesses more than doubled within the Evans Mills Zip Code increasing by 118%, corresponding to the increases in troop and civilian levels on Fort Drum in 2005/2006. By contrast, Calcium zip code businesses increased by only 25%, and those in the Black River zip code area declined by 7%. Fort Drum hovered just over 50 businesses from 2012 to 2020 (for years data was available).

Employees by Zip Code

Employees increased an average of 186% during that time within the three zip code areas outside of Fort Drum. The Evans Mills zip code experienced the greatest increase of 333%. The Calcium zip code business number increased by 63%. However, employees within the Black River zip code remained nearly flat, while Fort Drum

Figure 16. Number of Businesses by Zip Code Area

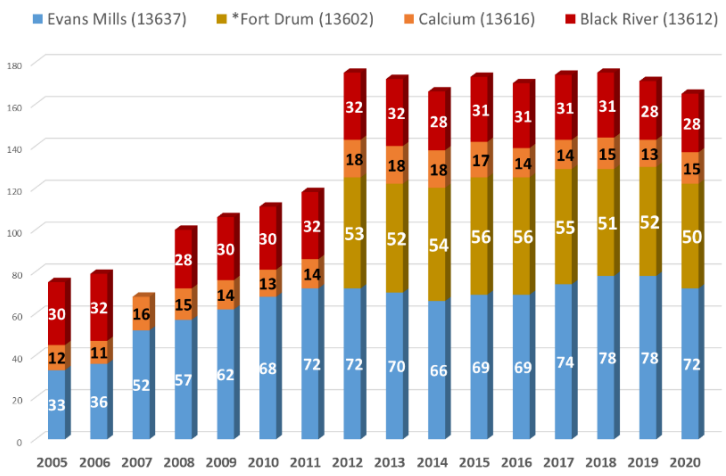


Figure 17. Business Employees by Zip Code Area

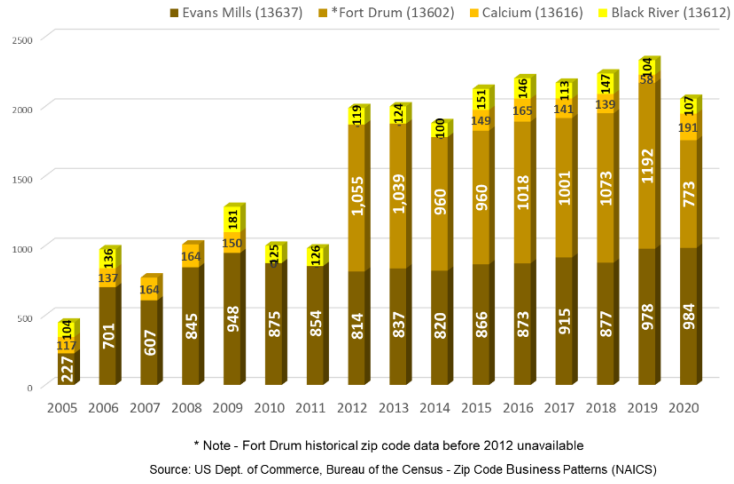
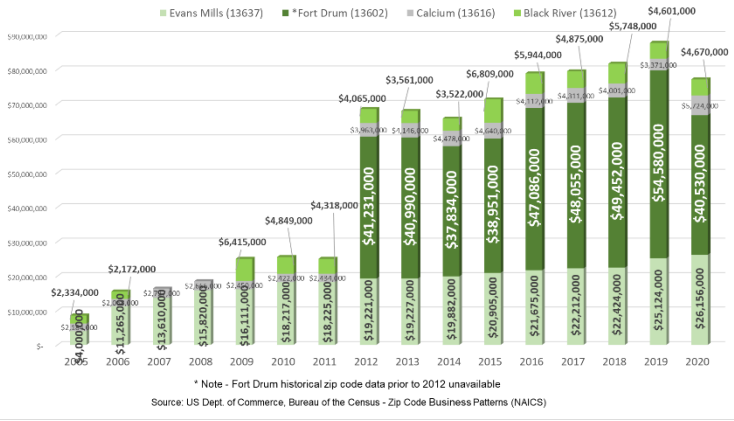


Figure 18. Business Payroll by Zip Code Area



employees declined by 27% which can be assumed to be pandemic related. Of note, data for number of paid employees is collected in March of each year, which may be prior to when some local businesses expand their summer staff for the season, resulting in potentially lower report numbers than during summer time peak employee periods.

Business Payroll by Zip Code

Payroll increased during the time period, driven largely by the Evans Mills zip code increase of 554%, while Calcium zip code payroll increased by 162% and Black River zip code payroll increased by 100%. Some of the increase could be due to minimum wage hikes. Fort Drum's payroll declined overall, with 2020 decline of 26% from 2019 to 2020, assumed to be pandemic related.

Local Labor Force Trends

The Census Bureau used to track labor force data as part of the decennial Census. However, as of the 2010 Census, such trends are now gathered as part of the American Community Survey, which is performed on a more frequent basis and to a smaller sample size of the population. Therefore, previously collected Census data may not be as comparable to the new estimates collected through the American Community Survey (ACS).

During the time period, the Town of LeRay Labor Force population 16 years and older increased by 7.8% and the civilian labor force increased by 31.9% as the table shows. Armed force fluctuations occur especially with deployments, therefore Census data should not be solely used to track soldier levels. In those cases, Fort Drum annual and quarterly data should be utilized.

Within the Fort Drum CDP, estimated population 16 years and over increased, but those in the armed forces dropped by 13.3%.

Table __. LeRay Local Labor Force Characteristics - 2000 to 2020.

LeRay Townwide	2000	2005-2010	2015- 2020	% change 2000 to 2020
Population 16 years and over	14,741	15,315	15,892	7.8%
Civilian labor force	4,176	6,773	5,509	31.9%
Armed Forces	7,528	4,112	6,933	-7.9%
Unemployed	509	741	358	-29.7%
Unemployment Rate	3.5%	4.8%	2.3%	-34.8%
Not in labor force	3,037	4,430	3,450	13.6%
Participation rate (CLF+Armed Forces)	79.4%	71.1%	78.3%	-1.4%

Fort Drum CDP	2000	2005-2010	2015- 2020	% change 2000 to 2020
Population 16 years and over	9,215	8,019	9,497	3.1%
Civilian labor force	1,378	2,560	2,082	51.1%
Armed Forces	6,556	3,287	5,681	-13.3%
Unemployed	244	406	259	6.1%
Unemployment Rate	2.6%	5.1%	2.7%	3.0%
Not in labor force	1,281	2,172	1,734	35.4%
Participation rate (CLF+Armed Forces)	86.1%	72.9%	81.7%	-5.1%

Calcium CDP	2000	2005-2010	2015- 2020	% change 2000 to 2020
Population 16 years and over	2,050	2,397	2,677	30.6%
Civilian labor force	741	1,314	1,519	105.0%
Armed Forces	630	359	758	20.3%
Unemployed	119	108	35	-70.6%
Unemployment Rate	5.8%	4.5%	1.3%	-77.5%
Not in labor force	679	724	400	-41.1%
Participation rate (CLF+Armed Forces)	66.9%	69.8%	85.1%	27.2%

Black River (v)	2000	2005-2010	2015- 2020	% change 2000 to 2020
Population 16 years and over	1,002	1,357	1,168	16.6%
Civilian labor force	582	759	598	2.7%
Armed Forces	84	170	116	38.1%
Unemployed	31	54	72	132.3%
Unemployment Rate	3.1%	4.0%	6.2%	99.2%
Not in labor force	336	428	454	35.1%
Participation rate (CLF+Armed Forces)	66.5%	68.5%	61.1%	-8.0%

Evans Mills (v)	2000	2005-2010	2015- 2020	% change 2000 to 2020
Population 16 years and over	495	552	376	-24.0%
Civilian labor force	278	314	221	-20.5%
Armed Forces	19	27	25	31.6%
Unemployed	13	15	13	0.0%
Unemployment Rate	2.6%	2.7%	3.5%	31.6%
Not in labor force	198	211	155	-21.7%
Participation rate (CLF+Armed Forces)	60.0%	61.8%	65.4%	9.0%

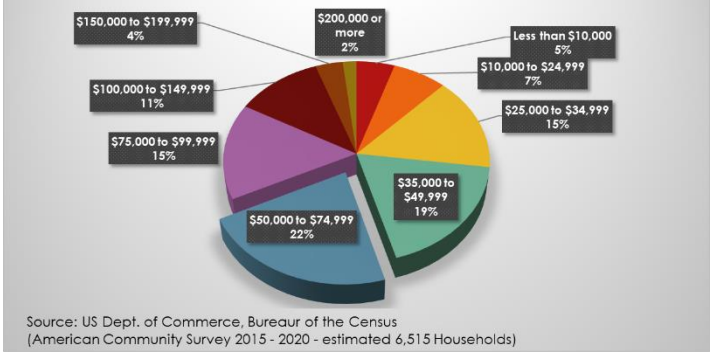
Within the Calcium CDP, the population over 16 and civilian labor forces increased while unemployment dropped. Those in the armed forces increased as well. Village of Black River population 16 years and over increased by 16.6%, while those in the armed forces increased by 38.1% and the unemployment rate doubled. Village of Evans Mills population over 16 declined by 24%, as did those within the civilian labor force (declining by 20.5%). However, those in the armed forces increased by 31.6%.

Household Income

Household Income as defined by the US Census Bureau, refers to the combined gross cash income of all members of a household, defined as a group of people living together, who are 15 years or older. It is used to evaluate the economic health of an area or to compare living conditions between geographic regions.

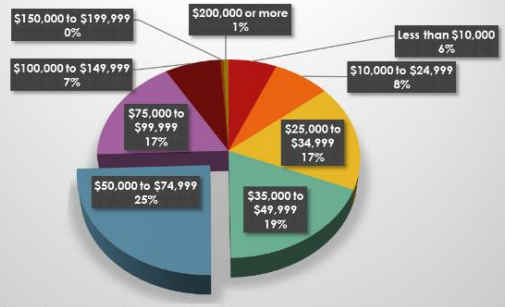
LeRay's largest segment, or 22% of households, earned between $50,000 and $74,999. The second largest segment, or 19%, earned between $35,000 and $49,999. Similarly, Fort Drum CDP's largest segment or 25% of its households consisted of the $50,000 to $74,999 income group. Its second largest segment with 19% earned between $35,000 to $49,999. The

Figure 19. Household Income - LeRay Townwide (2015 - 2020 estimate)



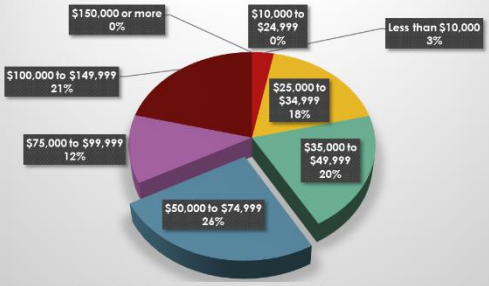
Source: US Dept. of Commerce, Bureaur of the Census
(American Community Survey 2015 - 2020 - estimated 6,515 Households)

Figure 20. Household Income - Fort Drum CDP (2015 - 2020 estimate)



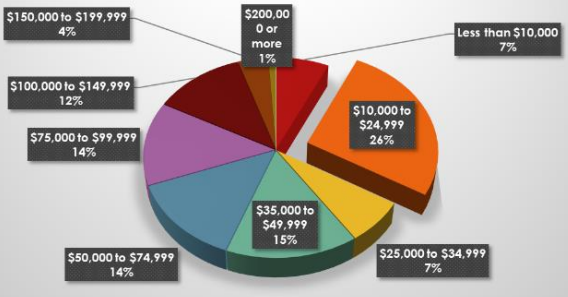
Source: US Dept. of Commerce, Bureaur of the Census
(American Community Survey 2015 - 2020 - estimated 3,409 Households)

Figure 21. Household Income - Calcium CDP (2015 - 2020 estimate)



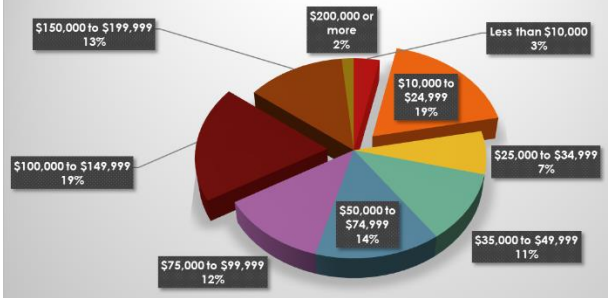
Source: US Dept. of Commerce, Bureaur of the Census
(American Community Survey 2015 - 2020 Estimated 1,447 Households)

Figure 23. Household Income - Evans Mills (v) (2015 - 2020 estimate)



Source: US Dept. of Commerce, Bureaur of the Census
(American Community Survey 2015 - 2020 Estimated 199 Households)

Figure 22. Household Income - Black River (v) (2015-2020 estimate)



Source: US Dept. of Commerce, Bureaur of the Census
(American Community Survey 2015 - 2020 Estimated 617 Households)

Calcium CDP also reflected this with its largest segment, with 26% of its households in the $50,000 to $74,999 income group and the second largest segment with 20% in the $35,000 to $49,999 income group.

Conversely, the Village of Black River's largest segment had 19% of its households however, earning between $100,000 and $149,999 and its second largest group earning between $50,000 and $74,999. Evans Mills largest segment with 26% of its households earned between $10,000 and $24,999, while its second largest segment earned between $35,000 to $49,999.

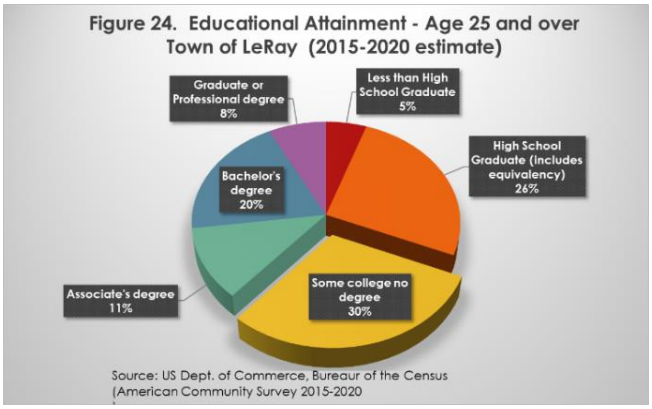
Educational Attainment

Educational attainment refers to the highest level of education that an individual has completed. This is distinct from the level of schooling that an individual may be currently attending. Differences in training levels can be a significant factor that separates developed and developing countries. Generally an economy's productivity rises as the number of educated workers increases, since skilled workers can perform tasks more efficiently.

The largest segment in the Town of LeRay was 30% of those age 25 or over in the Some College No Degree category. Its second largest segment was in the High School Graduate segment with 26%. Similarly, Fort Drum's largest segment had 35% in Some College, No Degree category but its second largest earned the bachelor's degree with 22%.

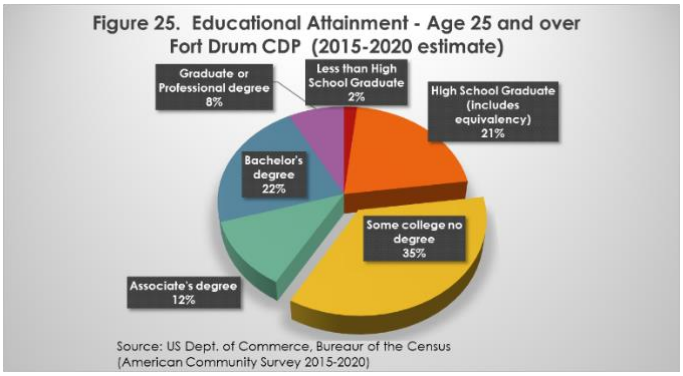
Conversely, Calcium CDP's largest segment was in the High School Graduate category with 34% and its second largest was 27% earning a Bachelor's Degree. The Village of Black River's largest segment as well was in the High School Graduate category with 38% and its second largest at 21% earned bachelor's degrees. The

Figure 24. Educational Attainment - Age 25 and over
Town of LeRay (2015-2020 estimate)



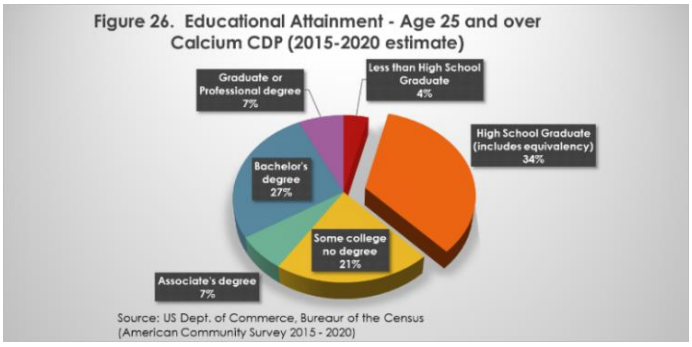
Source: US Dept. of Commerce, Bureaur of the Census
(American Community Survey 2015-2020

Figure 25. Educational Attainment - Age 25 and over
Fort Drum CDP (2015-2020 estimate)



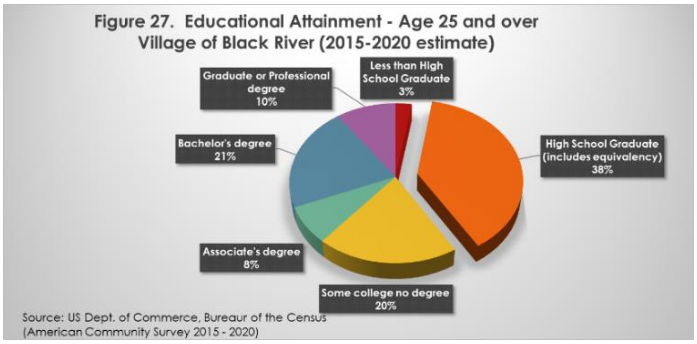
Source: US Dept. of Commerce, Bureaur of the Census
(American Community Survey 2015-2020)

Figure 26. Educational Attainment - Age 25 and over
Calcium CDP (2015-2020 estimate)



Source: US Dept. of Commerce, Bureaur of the Census
(American Community Survey 2015 - 2020)

Figure 27. Educational Attainment - Age 25 and over
Village of Black River (2015-2020 estimate)



Source: US Dept. of Commerce, Bureaur of the Census
(American Community Survey 2015 - 2020)

Village of Evans Mills largest segment at 34% was in the High School Graduate, as its second largest

segment with 23% had Some College, no degree in the years estimated.

Commuting - Place of Work

Commuting data includes where people work relative to where they live (including working from home). Commuting data can help policy makers and planners make decisions related to transportation infrastructure. One can also see the value in establishing employment centers within communities to diversify the local economy and limit long trips to job centers. The Census Bureau now collects commuting trend data as part of the American Community Survey in order to capture more frequent reporting.

Fortunately, 78% of LeRay's workforce was estimated to work within the Town as Figure 27 illustrates. Figure 28 illustrates that many of those live and work on the Fort Drum CDP, as 87% of Fort Drum CDP's resident workers live and work there. However, of those who live in the Calcium CDP, 11% live/work within the Calcium CDP while 46% live there and work within the Town. Therefore, 43% work outside the Town.

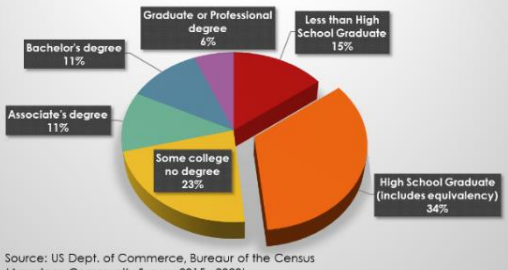
Of those who live in Black River, 9% also work in the Village, while 26% work elsewhere within the Town. Lastly, 65% work outside the Town. Of those who live in Evans Mills, 13% live/work there, 41% worked elsewhere in the Town, while 46% work outside the Town.

Also, the mean travel time for LeRay workers was 13.6 minutes, while nationally its 26.7 minutes.

Resident Occupations

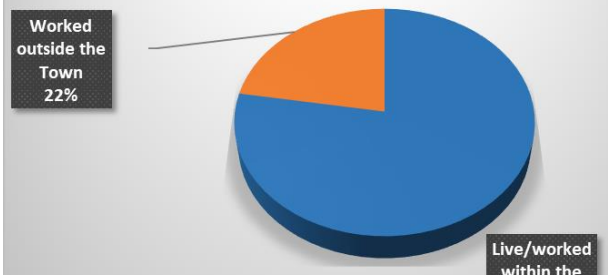
The Census Bureau defines occupation as the kind of work a person does on the job. LeRay's largest segment of occupations for its residents were in the Armed Forces, with 57% of its residents who work as of 2015-

Figure 28. Educational Attainment - Age 25 and over
Village of Evans Mills (2015-2020 estimate)



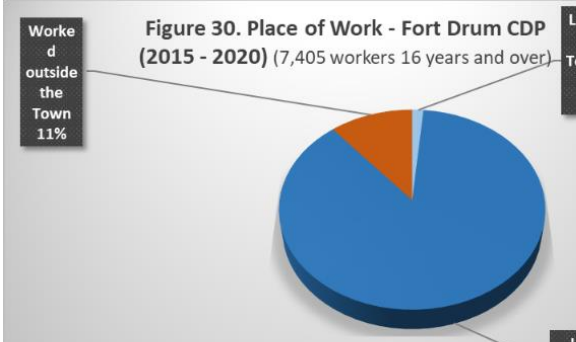
Source: US Dept. of Commerce, Bureaur of the Census
(American Community Survey 2015 - 2020)

Figure 29. Place of Work - LeRay Town-wide
(2015 - 2020) (11,808 workers 16 years and over)



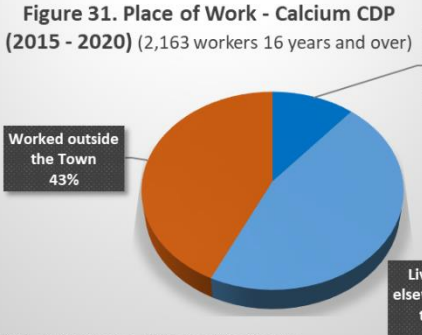
Source: US Dept. of Commerce, Bureau of the Census
- American Community Survey

Figure 30. Place of Work - Fort Drum CDP
(2015 - 2020) (7,405 workers 16 years and over)

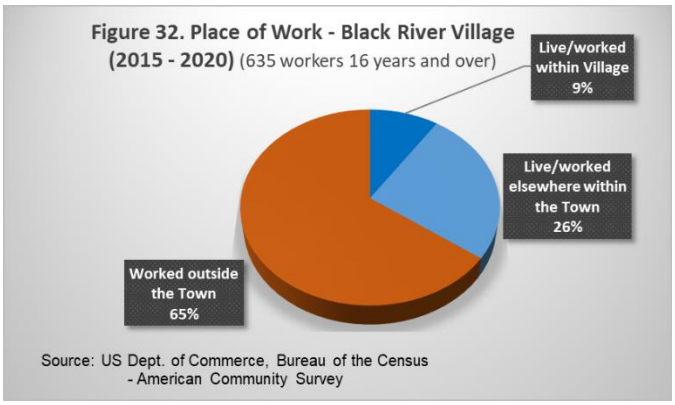


Source: US Dept. of Commerce, Bureau of the Census
- American Community Survey

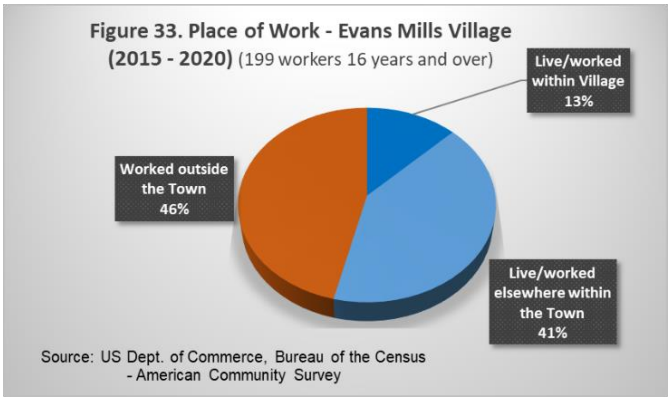
Figure 31. Place of Work - Calcium CDP
(2015 - 2020) (2,163 workers 16 years and over)

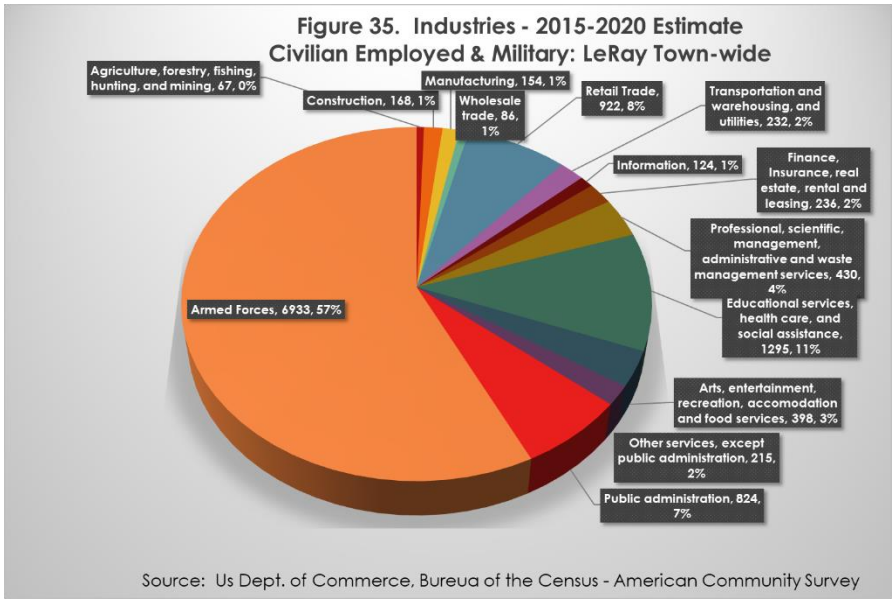


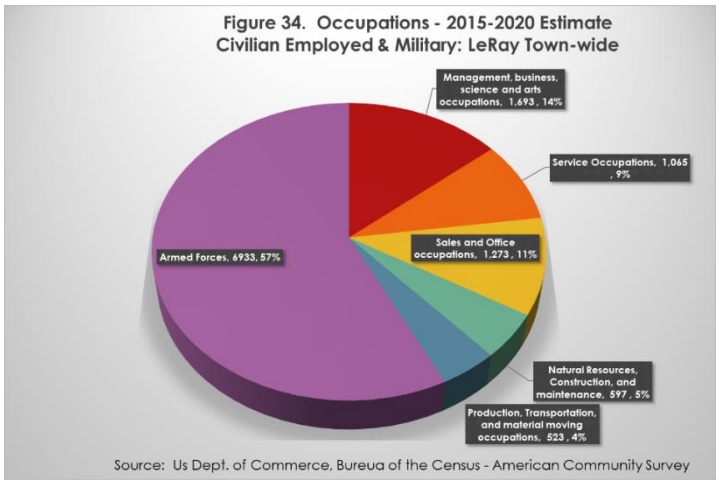
Source: US Dept. of Commerce, Bureau of the Census
- American Community Survey



2020 estimate. Second most was 14% in the Management, Business, Science and Arts Occupations.







Resident Employment Industries

The Census Bureau defines employment by industry as the kind of business conducted by a person's employing organization. The numbers reflect the type of employment industries where the residents work. The largest four industries among Town residents were in the Armed Forces at 57%, Educational Services at 26%, Retail Trade at 8%, and Public Administration at 7%. This is expected due to the proximity of Fort Drum and the predominance of housing on and off post.

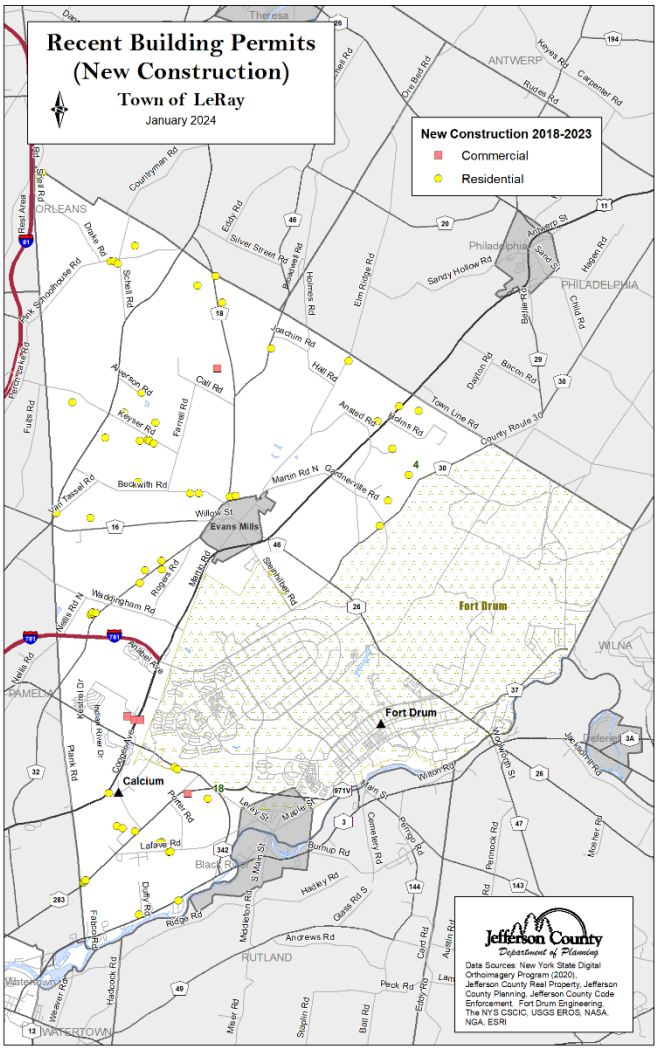
Recent Building Permits

During the past six years, residential and commercial building permits for new construction have steadily increased. While the number of units varied slightly from year to year, they indicate steady growth from 2018 to 2023. During the six years, the average number of housing units constructed were 13.67 per year, with 1.25 commercial structures per year.

Figure 36. Recent Building Permits, New Construction - 2018 to 2023 (Town of LeRay)

Source: Jefferson County Building Code Office

The map of Recent Building Permits illustrates the locations for new residences and commercial structures throughout the Town from 2018 to 2023. At this scale, patterns are difficult to discern, but there are several areas with multiple new housing units: Rogers Road, LaFave Road, Pink Schoolhouse Road, and County Road 32 to name a few.



Local Economic Development Priorities

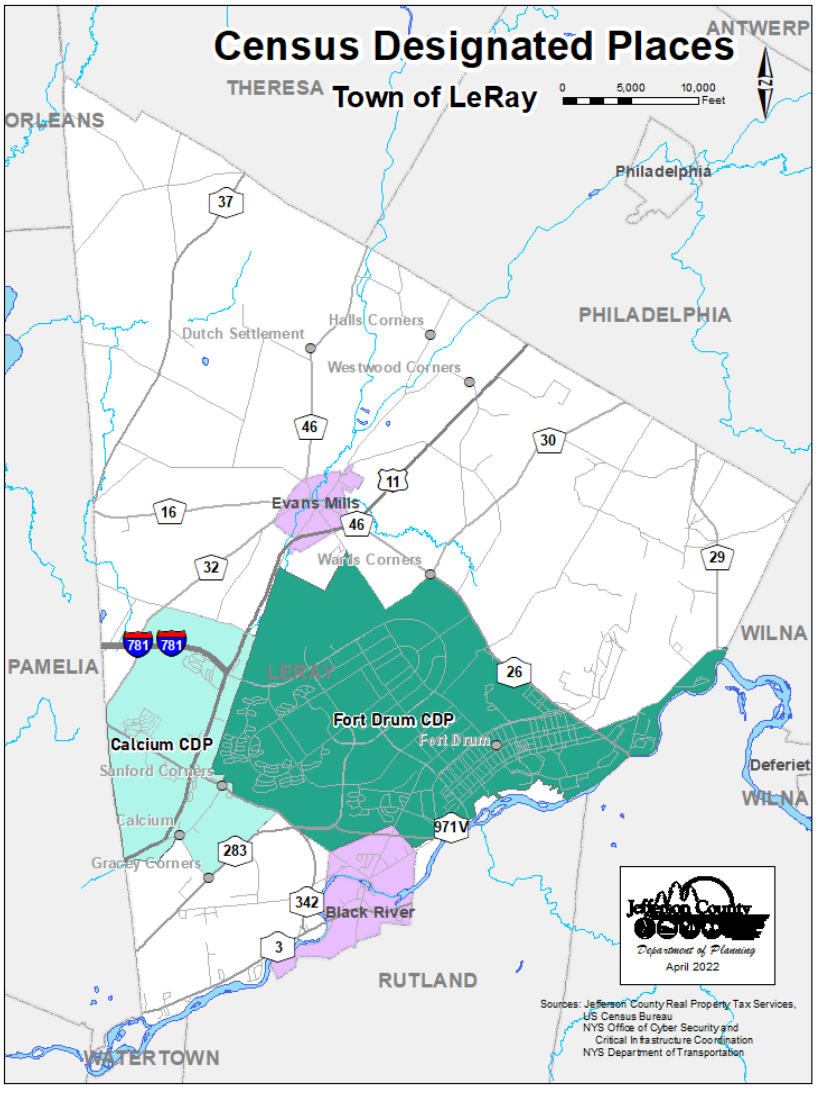
During the planning process, Town officials conducted a community survey, a planning issue/brainstorming open house, and hosted a vision, goals and strategies open house to garner additional public opinion regarding the Town Economic priorities:

1. Increase local employment,
2. Enhance quality of life,
3. Expand tax base while limiting Town liability,
4. Redevelopment of vacant or run-down buildings/properties,
5. More locally based stores needed,
6. Fill gaps in broadband coverage,
7. Main highway corridors need sidewalks/trails to enhance and expand pedestrian and bicycle access/safety.
8. Expand affordable and moderate cost housing.

A Few Economic Development Lessons/Truths:

1. In small towns, community development is economic development.
2. Small towns with the most dramatic outcomes tend to be proactive and future oriented; they embrace change and assume risk.
3. Successful community economic development strategies are guided by a *broadly held local vision*.
4. Defining assets and opportunities broadly can yield innovative strategies that capitalize on a community's competitive advantage.
5. Innovative local governance, partnerships and organizations significantly enhance the capacity for community economic development.
6. Effective communities identify, measure and celebrate short-term successes to sustain support for long-term community economic development.
7. Viable community economic development involves the use of a comprehensive package of strategies and tools, rather than a piecemeal approach.

Source: Small Towns – BIG IDEAS, University of North Carolina School of Government – N.C. Rural Economic Development Center



Contents

Table 2. Town of LeRay Road Mileage

Ownership/ Maintenance	Mileage	Percent
Town of LeRay	54.5	21.8%
Jefferson County	15.6	6.2%
New York State in Town	32.5	13.0%
other (Fort Drum & Village)	147.1	58.9%
Total	217.2	100%
Source: NYS Dept of Transportation - 2018		

Introduction

Transportation is a critical element for a developing area, especially one that depends upon the automobile. Development may be impeded without a safe, efficient, transportation network. The land use and travel generation relationship is constant because changes in one ultimately affect changes in the other. Transportation and land use should be coordinated to ensure a rational use of land, and a viable transportation network of roads and sidewalks that continues to serve the community.

COMPLETE STREETS

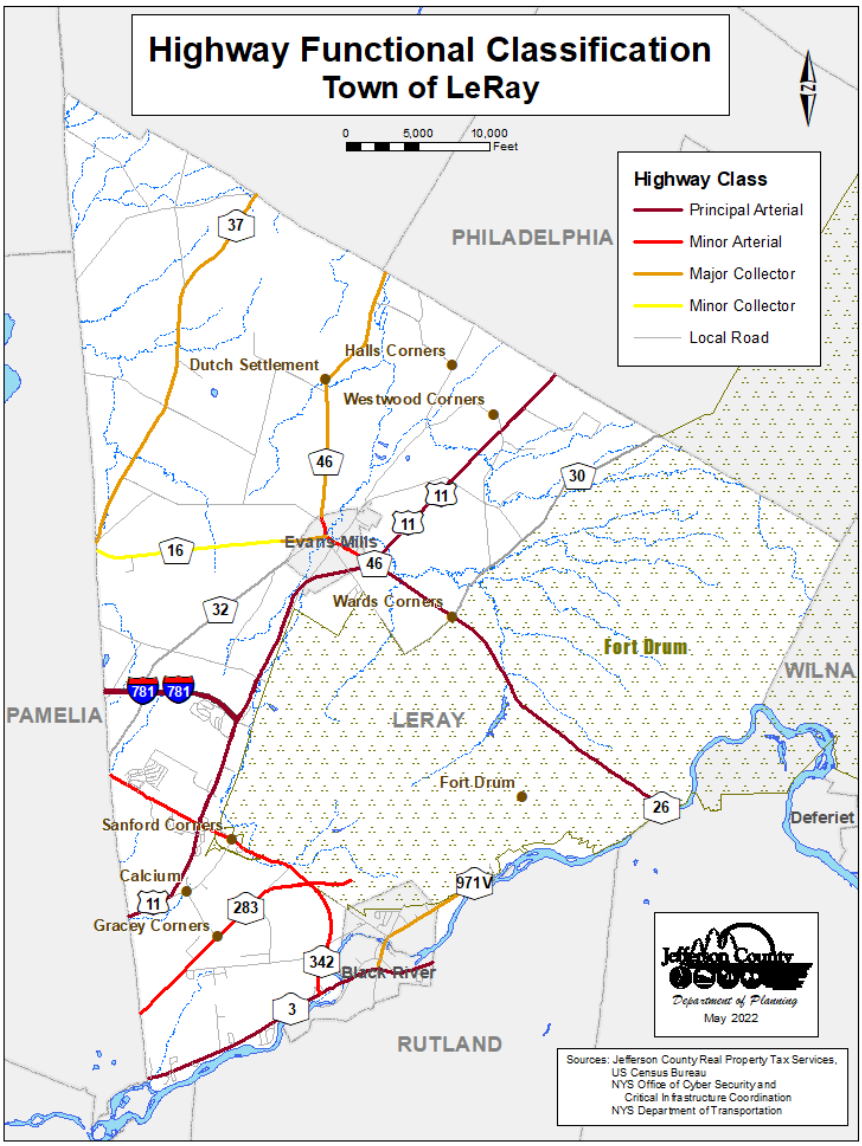
Complete streets: a transportation **policy** and design approach that requires **streets and sidewalks** to be planned, designed, operated, and maintained to enable safe, convenient and comfortable travel and access for users of all ages and abilities regardless of their mode of transportation.

A major key to economic growth for many communities is to have a convenient link to and from outside markets. Such access provides a way for goods to be available, as well as needed goods, services and/or employment that may not be found within the community. The most prevalent modes of transportation within LeRay are highways, streets, and roads, as well as sidewalks and railroad where available. The remainder of this section will give an overview of the transportation system, with the greatest focus given to the existing road network.

Road Mileage

Vehicle traffic within the Town travels along various state, county, town, village streets and highways. Table 2 shows that Other (Fort Drum) roads comprise the greatest amount of mileage in LeRay, with about 147.1 miles of roads, consisting of 58.9% of

the system. Town Roads comprise the second most amount of mileage, with about 54.5 miles consisting of 21.8% of the system. State Roads include about 32.5 miles, consisting of about 13% of roads in the Town.



Road Types

By and large, roads offer the primary means of transport into and out of a given area or neighborhood. They also provide access to properties of all types. As noted in the brief history section, road layout/attributes can affect growth patterns, providing access to markets and commuting to work and schools. Roads serve various functions throughout a given community. Principle and Minor Arterials, Major and Minor collectors, and local streets and roads have various capacities and serve in different ways.

Principle and Minor Arterial highways are designed to carry major traffic loads through and within a given area or region. Arterials carry the highest volume of traffic and much of the traffic consists of longer trips. In rural areas, they serve as major thoroughfares. For planning purposes, property access to abutting land should be subordinate to the movement of traffic loads. Therefore, a proliferation of driveway access points should be avoided where possible. In the Town, Interstates 781, US Route 11 and NYS Routes 3, 26, 283, and 342 are considered arterial highways.

Major collectors, streets that carry moderate traffic loads, gather traffic from local streets and then empty it into arterials. NYS Route 37 and Jenkins Road north of Evans Mills are both considered major collectors. Similarly, **minor collectors** gather traffic from local streets, but may also run through residential, commercial or industrial areas providing property access and traffic movement functionality. County roads often serve as minor collectors within LeRay.

Primarily, **local roads** provide land access and have lower traffic volumes. Local roads typically make up the largest volume of mileage, but carry only a small portion of total vehicle miles of travel. Local streets offer the lowest level of traffic mobility and thru-traffic is often discouraged.

Road Design Capacities

In order to discuss road system adequacy and review proposals that could affect its level of service, general capacities should be examined. Level of service (LOS) is a qualitative measure used to relate the quality of motor vehicle traffic *service*. LOS is used by transportation engineers to analyze roadways and intersections by categorizing traffic flow and assigning quality *levels* of traffic based on performance measure like vehicle speed, density, congestion, etc.

The number of expected vehicles per hour and average daily traffic levels is one technique to weigh potential project impact relative to current traffic levels and road capacity. Example design capacity standards

Table 3. General Street Design Capacity

Street Type	Practical Capacity - vehicles per hour	Design Capacity - average daily traffic
2-lane city street, 2-way	600-750	6,500-8,500
2-lane city street, 1-way	900-1,100	10,000-12,000

Note: The capacities are based on typical traffic flow characteristics; 10% of total daily flow in peak hour; 60 to 65% of peak hour traffic in predominant direction of flow; 20% turning movement; 10% trucks; 50% green signal time.
Source: International City Management Association, 1979

LEVEL OF SERVICE -

A: free flow. Traffic flows at or above the posted speed limit and motorists have complete mobility between lanes. The average spacing between vehicles is about 550 ft(167 m) or 27 car lengths

B: reasonably free flow. LOS A = speeds are maintained, maneuverability within the traffic stream is slightly restricted. The lowest average vehicle spacing is about 330 ft(100 m) or 16 car lengths

C: stable flow, at or near free flow. Ability to maneuver through lanes is noticeably restricted and lane changes require more driver awareness. Minimum vehicle spacing is about 220 ft(67 m) or 11 car lengths. This is the target LOS for some urban and most rural highways.

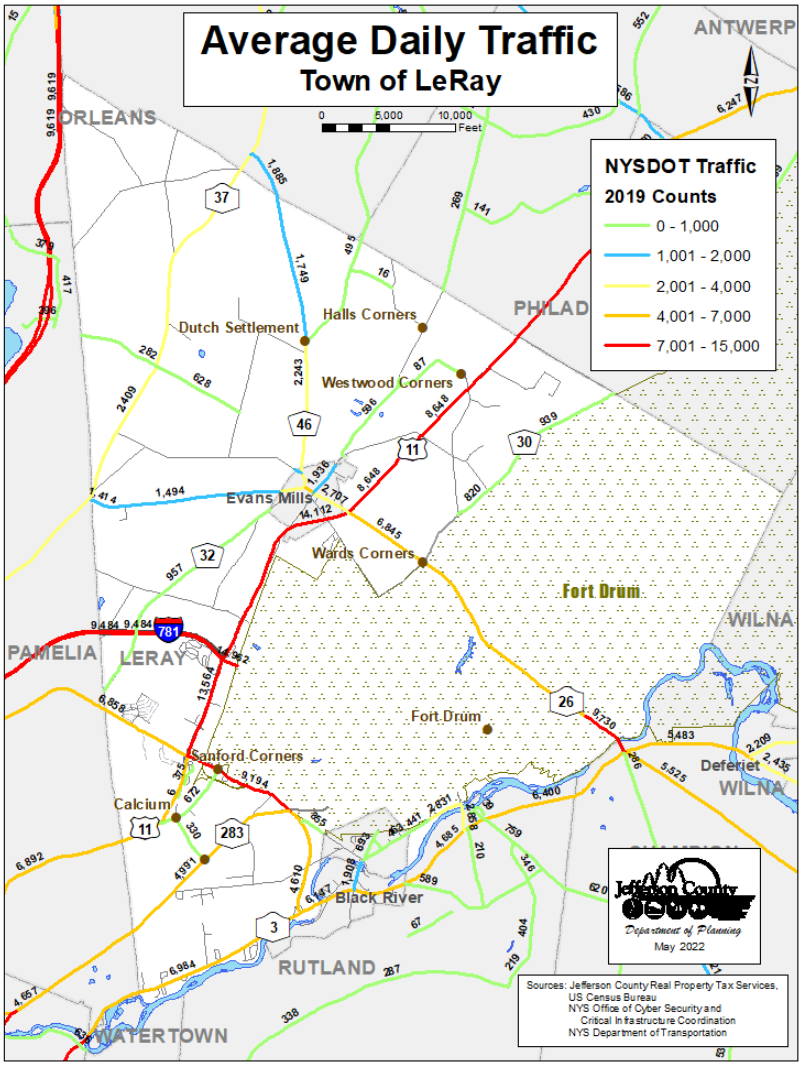
D: **approaching unstable flow**. Speeds slightly decrease as traffic volume slightly increase. Freedom to maneuver within the traffic stream is much more limited and driver comfort levels decrease. Vehicles are spaced about 160 ft(50m) or 8 car lengths. Minor incidents are expected to create delays. Examples are a busy shopping corridor in the middle of a weekday, or a functional urban highway during commuting hours. It is a common goal for urban streets during peak hours, as attaining LOS C would require prohibitive cost and societal impact in bypass roads and lane additions.

E: **unstable flow, operating at capacity**. Flow becomes irregular and speed varies rapidly because there are virtually no usable gaps to maneuver in the traffic stream and speeds rarely reach the posted limit. Vehicle spacing is about 6 car lengths, but speeds are still at or above 50 mi/h(80 km/h). Any disruption to traffic flow, such as merging ramp traffic or lane changes, will create a shock wave affecting traffic upstream. Any incident will create serious delays. Drivers' level of comfort become poor.[1] This is a common standard in larger urban areas, where some roadway congestion is inevitable.

F: **forced or breakdown flow**. Every vehicle moves in lockstep with the vehicle in front of it, with frequent slowing required. Travel time cannot be predicted, with generally more demand than capacity. A road in a constant traffic jam is at this LOS, because LOS is an average or typical service rather than a constant state. For example, a highway might be at LOS D for the AM peak hour, but have traffic consistent with LOS C some days, LOS E or F others, and come to a halt once every few weeks.

Most design or planning efforts typically use service flow rates at LOS C or D, to ensure an acceptable operating service for facility users

Source: American Association of State Highway and Transportation Officials



are shown in Table 1 and can be used for general planning purposes. They are also affected by other factors which must be taken into account during the design or approval of new streets and/or projects. The need for a developer sponsored (complete streets analysis) should be considered when potential expected volumes warrant.

LeRay Traffic Levels

Automobiles, trucks and other vehicles use the road system in their round-trip daily commute to work, school, or recreation trips, purchases at retailers and many other purposes. Also, tourists, deliveries, and other traffic flows in or through the Town on its way to other destinations. Such traffic is measured periodically, as well as estimated by the New York State Department of Transportation and by the Jefferson County Highway Department on their respective roadways. This is performed to measure traffic levels to help ensure the roadways are operating within their design capacity levels or to identify

Table 4. Average Traffic Levels
State Roads - Town of LeRay

Annual Average per 24 hour period- 2019	
Roadway	***Number of Vehicles***
NYS Route 3	
segment 1	6,984
segment 2	6,147
NYS Route 342	
segment 1	6,858
segment 2	9,194
segment 3	4,610
NYS Route 26	
segment 1	2,707
segment 2	6,845
segment 3	9,730
US Route 11	
segment 1	6,375
segment 2	13,564
segment 3	14,112
segment 4	8,648
Interstate 781	
segment 1	9,484
segment 2	14,962

Sources: State Roads -
NYS Dept. of Transportation, Region 7
(2019)

areas of concern. Please refer to Table 3 or Traffic Map.

Expected Trip Generation

For reference purposes, a sample of expected trips generated by a handful of common land uses can be found in Table 4.

Table 5. Sample Trip-Generation Rates by Land Use

Type of Development	Average Weekday Trip-Ends
Single-family, detached	9-10 per dwelling unit
Townhouse / Apartment	6 per dwelling unit
Fast food restaurant with drive-thru	500 per 1,000 sq. ft. of floor area
Supermarket	111 per 1,000 sq. ft. of floor area
Shopping Center	50 per 1,000 sq. ft. of floor area
Office Building	3 per employee
Light industrial	3 per employee

Source: Institute of Transportation Engineers "Trip Generation." 6th Ed, 1997

With most proposed projects, their expected trips can be weighed or compared to existing traffic levels. For example, roads or intersections are typically designed to handle a given number of vehicles. If a proposed project is reviewed that could generate a greater number of vehicles than the design capacity of the road or intersection, then improvements to the roadway in terms of the number of lanes, turning lanes, or intersection improvements could be considered to handle a significant increase in vehicles per hour.

Commuting Patterns

Commuting Patterns such as Place of Work for Town residents can be found in Chapter 3, Economic Trends and Priorities.

Arterial/Major Collector Road Protection

New York State invests significant amounts of resources in its arterial road system. Such highways are vital links between communities and serve as essential corridors for commerce, trade, tourism and recreational travel.

However, in a familiar pattern, residential and commercial growth has occurred along many arterials serving the state's communities. This growth over time can create a need for costly highway improvements including additional travel lanes, bypasses, turning lanes, and intersection signalization. Unfortunately, few communities have enacted controls to address the rate and quality of this arterial roadside development, and taxpayers must bear the costs associated with addressing strip development, traffic congestion, safety problems, and the resulting expensive remedial highway improvements.

Strip development occurs so slowly that it is seldom viewed as a crisis until traffic problems become severe. Development therefore is often allowed to continue in a

haphazard manner until significant problems occur.

Arterials that carry large volumes of traffic are attractive locations for strip development. Residential and commercial developments locate along the arterial over time until strip development becomes the predominant land use pattern. The ability of the arterial to move traffic then becomes seriously compromised, resulting in increased traffic congestion and reduced safety.

Inefficient zoning, excessive access points and poor site layout force businesses to connect access driveways to the arterial. If shared drives and/or side streets had been developed in concert, driveway access could have been rerouted to these streets.

While NYS DOT has the right to restrict access on state roads to a point, they must allow access to properties adjacent to their roads, unless it is along a limited access roadway. Every parcel of land is required by law to have reasonable access to it, and it is not always possible to limit driveways to a set spacing throughout the length of an arterial. In many cases, municipalities zone and allow subdivision of properties in a section of land in such a way that many small parcels must be granted access onto the arterial or else they would have no access at all. Additionally, such growth occurs not only on state roads, but also along county roads.

Local governments have the potential to better control land development along arterials and collectors. If it is a state controlled roadway, the local municipalities and the state jointly control the roadway and access to it. Reasonable access does not mean that access has to be provided directly off a main street or highway. In some cases, reasonable access may be provided off side streets or roads. Local governments therefore should prepare and adopt comprehensive planning and zoning ordinances preferring more favorable overall development patterns.

Pedestrians vs. Vehicles

Prior to the advent of the automobile, many communities flourished as pedestrian oriented, compact hamlets or villages. Evans Mills and Black River reflect this pattern with their historic downtown structures and nearby walkable neighborhoods with churches and other destinations in close proximity. This development pattern precluded the need for many parking spaces at business locations.

More recently, automobile dependent development that is more spread out with larger parking areas, has resulted in building placement further from the street and often separates residential areas. This pattern reinforces automobile dependency, which can increase traffic levels and limits pedestrian options. Options for more mixed-use, more compact development should be examined to reverse this trend. Similarly, parking should be located to the side yard and/or rear with bicycle and pedestrian pathways included to provide better pedestrian access.

Pedestrian Considerations

Maintaining walkability involves pedestrian scale, safety and convenient access. Along

with hours of operation, walkability benefits storefronts by increasing the variety and likelihood of customer traffic from drop-in and destination shoppers.

Ongoing sidewalk maintenance from residential areas (mainly in villages) as well as along primary roads/streets can affect the level of pedestrian access. Crosswalks, sidewalk maintenance and better business accessibility should be a priority for LeRay's commercial corridors, hamlets, as well as the sidewalk connections to nearby schools and/or parks where applicable.

Even more important is accessibility and safety for all users such as pedestrians and bicyclists, youth, older adults as well as people in wheelchairs and those with strollers.

Pedestrian and Bicycle Facilities

As with many historically rural areas, LeRay has a limited sidewalk system. Most sidewalks exist in higher density areas, such as the Villages of Evans Mills and Black River. However, there are sidewalks within the residential subdivision along Anable Avenue near Route 11.

There is a two-mile nature trail (the DANC Calcium Trail also known as Kanik Trail) located between County Road 138 (Sanford Road) and US Route 11. The trail is provided through the efforts of the Development Authority of the North Country (DANC) and Fort Drum.

On the Fort Drum Installation, there are numerous trails available. However, due to national security concerns, none of the trails are connected to off-post areas at this time.

In most areas of LeRay, bicyclists and pedestrians are accommodated on the shoulders of the roadways. US Route 11 is also a New York designated regional bike route. According to the American Association of State Highway and Transportation Officials (AASHTO), a roadway that is also a designated bicycle route with an average highway speed of 50 miles per hour should have a minimum shoulder width of 6 feet. In most sections of US Route 11 in LeRay, the shoulder width exceeds this standard. However, due to the high auto speeds in this corridor and the condition of many shoulder areas, local bicycle traffic is minimal.

Amish buggies/pedestrians

Old Order Amish do not drive motorized vehicles or farm equipment. Therefore, areas in the Town with Amish residents result in horse drawn buggy, cart and wagon traffic as well as pedestrians of all ages who may travel or walk alongside Town and other local roads. Destinations for Amish travelers can be associate with this traffic.

Amish buggies typically travel at a rate of 5 to 8 mph, and share roadways throughout upstate New York. However, areas with Amish homes/farms and school result in frequent buggy and wagon traffic and warrant some precautions when road improvements occur. Considerations include:

- warning signs (road signage) in areas drivers are more likely to come upon horse drawn buggies/wagons
- shoulder widening/alternative treatments or materials
- hill climbing lanes
- buggy pull-offs
- buggy improvements

A number of factors affect the safety of vehicular/buggy use of the same roads. Motorists underestimating speed differential by drivers/operators. A lack of visibility caused by blind hills/curves or both can result in unexpected encounters. Of particular focus

should be signage and wider shoulders in neighborhoods with multiple Amish residences or an Amish School should be considered. The main arterial highways typically include wider shoulders such as US Route 11.

Airport Service

The closest commercial airline facility within Jefferson County is the Watertown International Airport, located near Dexter, just west of the City of Watertown. It serves the primary aviation needs of Jefferson County with daily commercial jet service to and from Philadelphia, Pennsylvania. Other nearby commercial airports include Syracuse Hancock International Airport (65 miles south), Ogdensburg International Airport (70 miles northeast) and Ottawa International Airport (125 miles north).

Railroad Service

The CSX Montreal Secondary Railroad Line, which is part of CSXT's St. Lawrence Subdivision, traverses through the Town of LeRay. The rail line runs from Syracuse to Massena. A spur at mile post QM 78.5 provides connection to the Fort Drum line that leads into the military facility. Goods transported on rail-lines can be seen daily in LeRay along a CSX railroad that transects the region. There are four at-grade railroad crossings:

- County Road 138 (Sanford Corners Road) - just south of NYS Route 342
- NYS Route 342 - just east of CR 138
- County Road 46 (Noble Drive) - Village of Evans Mills
- Elm Ridge Road - just outside Village of Evans Mills

Public Transit

Trailways national bus transit is available in LeRay at the bus stop connection at the Town Office in Evans Mills. Pickup schedules vary but 8:25am, and 1:00pm departure times are listed on their website. Destinations include Syracuse, New York City and many others.

Transit from point to point within LeRay and Jefferson County, is not widely available on a large scale, however, Lewis County Public Transportation does provide busing Monday through Friday with service to and from Fort Drum and some other destinations such as JCC, the Watertown International Airport, in Jefferson and more in Lewis County daily. Bus routing and location schedules are on their website or one can download their transit app. In addition, a Jefferson County Coordinated Transportation Plan was completed, and it identifies transit needs throughout the County. Funding to purchase buses is being pursued by Jefferson County to provide public transit along major traffic routes in a limited fashion is the initial goal of the effort.

Limited transit in the town forces those without automobiles to rely on the region's taxi service when available, uber, Lyft or the like to manage as best they can by walking or bicycling along town roads not well suited to non-auto uses.

As LeRay has grown as regional employment opportunities have become centered on Fort Drum, Watertown, and along US 11; and as the price of fuel fluctuates, the lack of non-automotive options for residents will increasingly become an issue for LeRay's residents.

Town Transportation System Priorities:

√ Maintain arterial street traffic flow by promoting interconnected projects between site parking areas such as the commercial corridor along US Route 11, as well as shared access, limit the number of access points along traffic arteries such as along US Route 11 and NYS Routes 342 and 3, and follow NYS DOT standards for driveway accesses. These steps should limit adding an excessive number of conflict points, decrease congestion and maintain traffic safety.

√ Consider sidewalk accessibility a priority within the Town, especially in the hamlets, villages and commercial corridor areas and where schools and parks exist within walking distances, to enhance pedestrian safety, as well as maintain access and connectivity among neighborhoods and business areas for all users.

√ Increase pedestrian access and connectivity within proposed parking areas and between project sites.

√ Consider an affordable transit bus service to enhance access to those who may not own a vehicle but would otherwise frequent businesses and gain access to needed services such as health care.

√ Consider phasing pedestrian (sidewalk, crosswalk, and roadway) improvements to allow priority projects to be pursued and allow funding for secondary projects and other potential needs to be sought within subsequent rounds of potential funding.

√ Inventory key destinations, parking, and way-finding to identify potentially needed pedestrian connections.

√ Consider implementing pedestrian and bicycle improvements and Roadway Design Elements.

√ Consider installation of buggy warning signs in areas motorists are likely to encounter Amish buggies, wagons and pedestrians.

√ Consider Amish buggy/wagon and pedestrian safety thereby potentially installing wider shoulders when reconstructing Town Roads in Amish neighborhoods.

COMPLETE STREETS POLICIES – CHECKLIST – NYS DOT

An ideal Complete Streets policy includes the following:

1. **Vision and intent**: Includes an equitable vision for how and why the community wants to complete its streets. Specifies need to create complete, connected, network and specifies at least four modes, two of which must be biking or walking.
2. **Diverse users**: Benefits all users equitably, particularly vulnerable users and the most underinvested and underserved communities.
3. **Commitment in all projects and phases**: Applies to new, retrofit/reconstruction, maintenance, and ongoing projects.
4. **Clear, accountable expectations**: Makes any exceptions specific and sets a clear procedure that requires high-level approval and public notice prior to exceptions being granted.
5. **Jurisdiction**: Requires interagency coordination between government departments and partner agencies on Complete Streets.
6. **Design**: Directs the use of the latest and best design criteria and guidelines and sets a time frame for their implementation.
7. **Land use and context sensitivity**: Considers the surrounding community's current and expected land use and transportation needs.
8. **Performance measures**: Establishes performance standards that are specific, equitable, and available to the public.
9. **Project selection criteria**: Provides specific criteria to encourage funding prioritization for Complete Streets implementation.
10. **Implementation steps**: Includes specific next steps for implementation of the policy.

Source: The Complete Streets Act (Chapter 398, Laws of New York). NYS Department of Transportation

- Incorporate Complete Streets initiatives and criteria to enhance pedestrian safety and quality of life.
- The Town of LeRay, hamlets and Villages should collaborate and consider adopting Complete Streets Policies.
- Create an implementation plan with timeframes partnering with the Town of LeRay and potential Villages, hamlets, and Fort Drum.
- The Complete Streets Act (Chapter 398, Laws of New York) was signed into law on August 15, 2011 and requires state, county and local agencies to consider the convenience and mobility of all users when developing transportation projects that receive state and federal funding.

Contents

Introduction

Community facilities and services are one of the more visible aspects of the Town's involvement in the life of its citizens and help make a positive statement about its visual character. Identifying needs related to community facilities, is important within the Comprehensive Plan process. By maintaining facilities to meet the growing demands of residents and visitors, the community can enhance its quality of life.

This chapter provides an overview of the existing public facilities, public recreation areas and facilities, infrastructure, and services available in the Town.

Government Facilities

The LeRay Town Office is located at 8650 Leray Street, in Evans Mills. The Town Supervisor's office is located there, along with the Town Clerk, the Zoning Enforcement Officer, Community Development Coordinator, Clerk to the Supervisor and the Town Assessor. This facility is also completely Americans with Disabilities Act (ADA) accessible.

Police, Fire, and Rescue

The necessity to provide police and fire protection is a matter of public policy and also based upon the public's perception of security. The Town relies on the New York State Police, with a substation located on NYS Route 37 in the Town of Pamelia, and the Jefferson County Sherriff's Office to provide law enforcement.

Emergency services agencies within the Town are dispatched through the Jefferson County 911 center. Primary dispatching occurs through pager alert systems as well as cellular text messaging. Each fire department chief can set up alarm assignments with mutual aid departments through dispatch for different call types.

The Town has four fire departments: Calcium Fire Department, Evans Mills Fire Department, Black River Fire Department, and Pamelia Fire Department who all provide volunteer fire and rescue service to the Town. In addition, the Fort Drum Fire Department provides full-time fire protection on the military installation and assists fire fighting efforts in LeRay and other Towns and Villages (mutual aid) when needed upon request. Other adjacent Departments also cooperate similarly as needed.

Ambulance Services: Black River Ambulance and Evans Mills Ambulance both provide emergency medical services to the Town of LeRay.

Air Ambulance Service: Medivac emergency rescue/transport helicopter service is provided by LifeNet of New York. LifeNet provides critical care air medical transport throughout New York, Pennsylvania, Vermont, Massachusetts and Connecticut.

Medical Services

Nearby Hospitals include Samaritan Medical Center, a 294-bed not-for-profit hospital in the City of Watertown and Carthage Area Hospital, a 25-bed facility in the Village of Carthage.

The LeRay MEDICAL building located on 26908 Independence Way just outside Fort Drum's main gate has Samaritan Family Health Center, which provides primary care and gastroenterology services. The building also hosts Northern Physical Therapy. North Country Family Dental also has offices at 26908

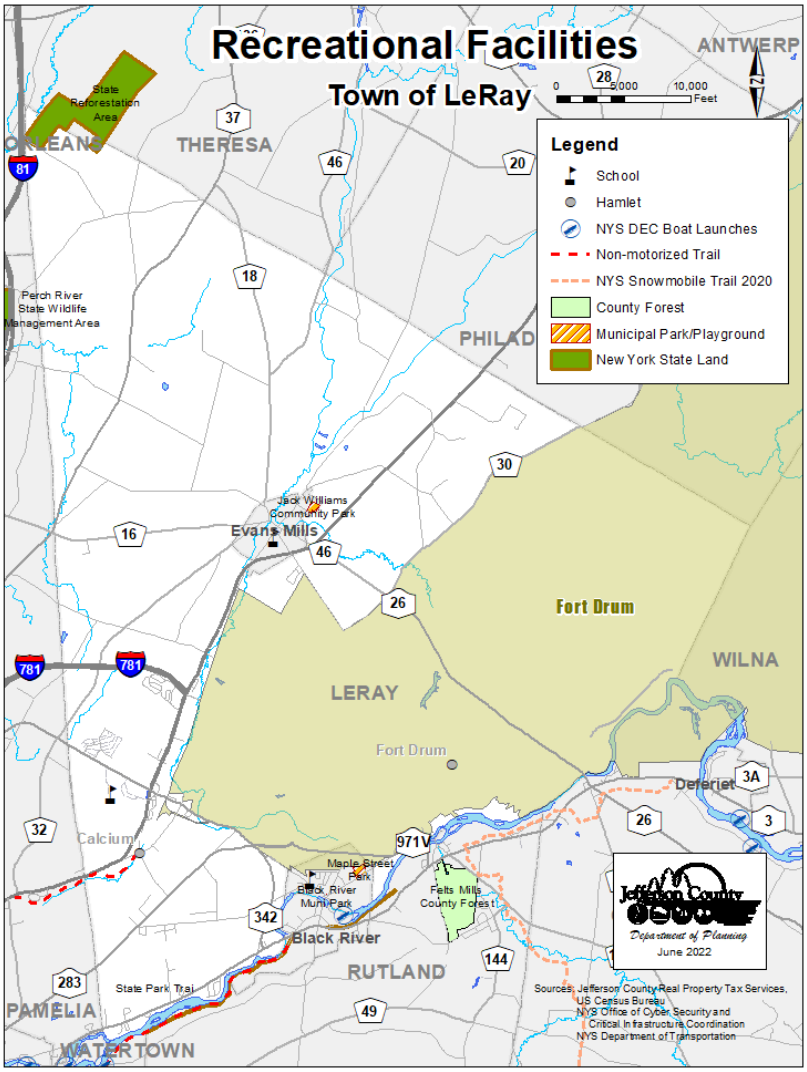
Independence Way, Suite 202 (Dental) & Suite 200 (WIC).

Evan Mills Clinic provides primary care and is located at 26121 US Route 11, also outside the main gate.

Exceptional Kids & Family Therapies provides physical therapy services at Freedom Plaza, 26121 US-11.

Black River Medical Center serves primary care needs and heart specialist services. It is located at 26060 NYS Route 3.

NNY Autism Clinic is located at 103 S Main St A, in the Village of Black River.



Recreation Areas – Survey Input

There are a number of parks and recreational areas in use within the Town of LeRay. There are approximately 104 acres of parkland available for the public in the Villages of Black River and Evans Mills, and Coyote Flats and the Kanik Trail in the Town. In addition, Remington Pond Park on Fort Drum is a large park but is not publicly accessible being located on the installation.

Based on open ended responses of the 2021 Town of LeRay Community Survey (Appendix A), people felt that walking trails, parks and forests were some of the greatest Neighborhood and Town-wide assets. Support was shown for an increase in trails, recreational areas, and open space within the town along with other priorities. Based on discussions with community members, the existing parks and recreational areas are well used, but enhancing and creating additional recreation and trail amenities in LeRay could be considered a long-term goal that will benefit the town greatly. Many community members also cited a desire for more opportunities for organized sports leagues in the town. Existing parks are described as follows:

Jack Williams Park

The Jack Williams Community Park is a 10-acre recreation area located in the Village of Evans Mills. The park features a playground, two pavilions, tennis courts, two ball fields and a basketball court.

Maple Street Park

The 15-acre Maple Street Park is located in the Village of Black River. Amenities include tennis courts, three ball fields, a municipal recreation building and playgrounds. The village also runs a summer recreational program for children out of the park.

Coyote Flats State Forest

A portion (approximately 70 acres) of the approximately 553-acre Coyote Flats State Forest is located in the northeastern tip of town. In addition to coyote, the forest is home to beaver, white-tailed deer, muskrat, mink and several birds. There is limited pedestrian access to the forest due to the forest floor consisting mainly of wet bottomland. The wet ground conditions also limit timber harvesting in the forest.

Remington Park

Fort Drum provides a myriad of recreation and fitness opportunities within the bounds of the post; however many of these facilities are restricted to base personnel. The most notable recreational facility at the fort is Remington Park, which is the only on-post recreation amenity that is routinely available for use by the general public. Located on the shores of Remington Pond, the park features five large pavilions, several medium-sized pavilions and picnic tables for smaller groups. Volleyball courts, horseshoes, playgrounds, fishing docks (catch and release only), a beach area (with kayak and paddle boat rentals and swimming), a fitness trail, and food concessions are also available. Civilians have full use of these recreation areas with the exception of the pavilions which require a military ID for rental. Additional Recreation Opportunities In addition to the aforementioned parks and trails, there are several other recreation areas within the town.

Overlook Park

Overlook Park is located off Route 3 in the Village of Black River and is approximately one-half acre in size. The park serves as a picnic area with views of and access to the Black River; however, there are no put-ins or access points for kayaks or canoes.

Other Small Parks

There are also numerous small parks and recreation areas associated with subdivisions and apartment

complexes within LeRay. These recreation areas tend to be viewed as for use by residents of the given development and, based on observation of satellite photography, typically consist of a playground, several basketball courts (typically half-court), and an occasional tennis court. With proper planning, these parks could potentially be linked together with trails to form a more public park system.

Trails

Currently several publicly used formal trail systems exist in the Town, the Kanik Trail (formerly the Calcium Trail), the Black River Trail, and a small trail at Coyote Flats State Forest. Another exists in the Village of Black River, the Poors Island Trail. This is in addition to the trails on Fort Drum, only some of which are accessible to the public. The LeRay and Black River trail systems are described on the next page.

Calcium Trail (renamed Kanik Trail)

The former Calcium Trail was renamed the Kanik Nature Trail in 2010 in honor of James R. Kanik, the first chairman and CEO of the Development Authority of the North Country (DANC). DANC collaborated with Fort Drum to create the two-mile multi-use trail that extends between the Towns of Pamelia and LeRay. The popular gravel walking and biking trail runs parallel to US Route 11 and connects to the Hamlet of Calcium. There are picnic areas along the path and parking facilities at both ends of the trail, one in the Hamlet and the other accessed from the Route 11. The DANC Kanik Trail is a highly used recreation facility within the towns of Pamelia

and LeRay. There are 8.61 acres of land along the trail in LeRay.

Black River Trail

Another popular trail, albeit primarily within the Town of Rutland, the Black River Trail is a 4.5 mile stretch of paved trail, converted from an old rail road bed. Originating in the Town of Rutland, the Black River Trail runs adjacent to the river and connects to the Village of Black River. While the Black River Trail is not in the Town of LeRay, it is a trail of regional significance and links the Village of Black River to the City of Watertown. The terrain is woodland and follows the Black River for 3.5 miles. This trail presents recreational opportunities for hiking, jogging, biking, snow shoeing and cross-country skiing. The trail connects the City of Watertown – Waterworks Park to the Village of Black River. Three parking areas exist, one on NYS Route 3 on the Village of Black River end, one on Ridge Road in the Town of Rutland, and the third at Waterworks Park in the City of Watertown. Further trail extension is dependent on funding and support.

Poor's Island Trail

Another trail frequently used by LeRay residents, the Poor's Island Trail in the Village of Black River is a two-mile-long gravel/dirt trail along the Black River on Poor's Island, maintained by Brookfield Power.

Coyote Flats State Forest

Located at the northern tip of the Town, this 553-acre state forest was named Coyote Flats in the 1970s, at a time when the coyote was first making a comeback in the north country. It was aptly named since the entire forest is comprised of low, flat, wet bottomland often frequented by coyotes.

Because of the wet ground conditions, timber harvesting from this state forest is extremely limited. Foot access to the area is from the west, along the Coyote Trail. This trail can be used for non-motorized recreation but is also open to motor vehicles. Access is from NYS Route 411, then south on Snell Road, or Drake Road from the south.

Golf Course

The Highland Meadows Country Club, less than one mile from LeRay west on NYS Route 342 is a public 18 hole golf course in the Town of Pamelia. There is a Club House with a full bar, restaurant and snacks. Memberships are offered, weekly leagues, events, tournaments, and special events occur throughout the season including a driving range.

Open Access Telecom Network

The Open Access Telecom Network is a fiber optic network that the Development Authority of the North Country has been seeking funds for and expanding on in the region since 2003. It consists of carrier-class telecommunications network serving the northern portion of New York State, connecting our region to carrier locations in Syracuse, New York.

Within the Town of LeRay, the fiber optic system provides access along US Route 11, most of NYS Route 342 (refer to the Development Infrastructure Map).

Municipal Water/Sewer

The Town of LeRay provides water and sewer service within four respective water districts and sewer districts within the town. DANC operates both water and sewer systems for unincorporated areas of LeRay.

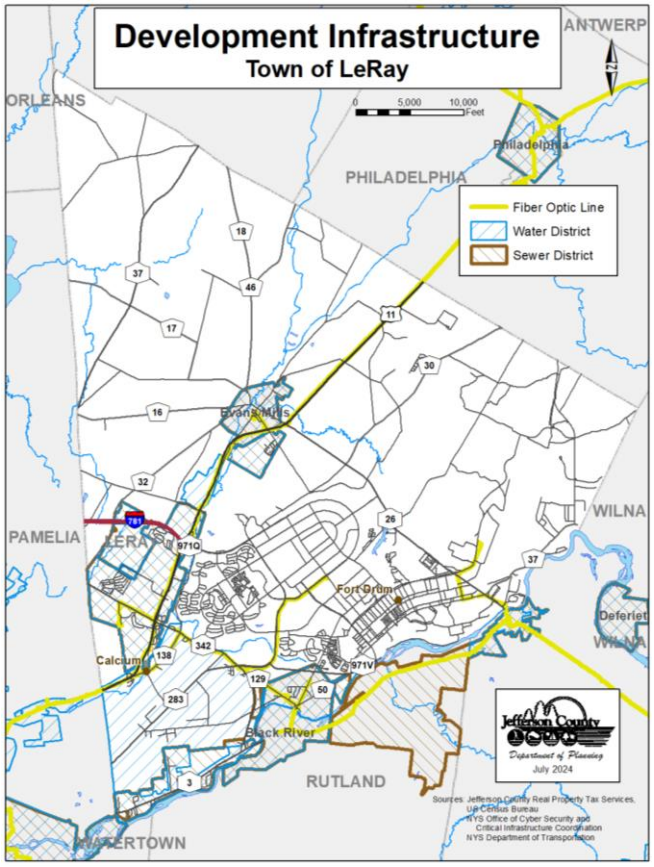
The following provides a brief general description of the districts within the town: Water District #1 / Sewer District # 3, includes NYS Route 3 from the Town of Pamelia line to the bridge crossing the Black River near the Village of Black River. These districts also include the following intersecting roads: Admiral's Walk, Patricia Drive, Riverglade Drive, Twin Oaks Drive, Duffy Road, Riverbend Drive East and West and Cullen Drive.

Water District # 2 / Sewer District # 1, includes the area around the intersection of US Route 11 and NYS Route 342. It includes NYS Route 342 west to the Town of Pamelia line and US Route 11 north to Waddingham Road, including Johnson Road and Holbrook Road. These districts also encompass US Route 11 south to the railroad underpass and NYS Route 342 east to the railroad overpass and the streets in the Woodcliff and Woodcreek housing developments and the LeRay Heights and Ledges housing developments.

Water District # 3 / Sewer District # 2, includes the area along Steinhilber Road including Pleasant Creek Meadows housing development. Water District # 4, is adjacent to District #1 and includes the area east of US Route 11 and south of NYS Route 342. The areas served by this district include properties along NYS Route 283, LaFave Road, Porter Road, Gracey Road, Sanford Corners Road (CR 138), Victory Lane and Converse Road.

Municipal Water Service

LeRay's water system is comprised of three main sub-systems: well field intake, storage and distribution. The primary source of the Town's water supply comes from five (5) Town owned and maintained well fields. The water pumped from these well fields is disinfected with sodium hypochlorite before distribution to 1,711 service connections.



The water storage facilities within the Town of LeRay consist of two (2) 500,000 gallon elevated storage tanks located within the Town boundary on NYS Route 342 and NYS Route 283. The Town is in the process of planning and constructing major improvements to its potable water system. These improvements include a new watermain to interconnect two formerly separate water districts, replacement of leaking mains along US Route 11 adjacent to the Walmart commercial complex, filtration improvements to the Town's major potable water wells, a new watermain extension to the Pleasant Creek Meadows housing complex and new water source/well development throughout the Town.

The Town of LeRay water storage tank (LeRay II), Water District No. 2 and 4 interconnect and replacement of the Route 11 watermain are currently in construction as the first project items to be completed for the Town's overall water system improvements project. The LeRay II water storage tank will be set to the same elevation as the Town's current water storage tank and provide double the potable water and firefighting capacity for the Town. The Town's water system is a similar pressure to Fort Drum and as such the base may be able to use the Town as a back-up during system maintenance and emergencies.

If an emergency situation arises, the Town has a backup connection with DANC located on Sanford Corners Road and the City of Watertown on NYS Route 3. DANC developed, owns, and operates the Watertown-to-Fort Drum Waterline, which serves Fort Drum and the Towns of Champion, LeRay, and Pamelia. LeRay also purchases a small quantity of water from the Village of Black River to serve a low pressure zone on NYS Route 342.

Municipal Sewer Service

The Town's primary sanitary sewer system is comprised of one main sub-system: the collection system. This sanitary sewer collection system consists of gravity mains, force mains and pumping stations. Pipe sizes in Town range in size from 8" to 21" in diameter. About 10-15% of the system utilizes force mains, with the remaining portion is served by gravity feed. The Town also owns and operates 10 pump stations in the collection system. The collection system terminates at the DANC transmission lines. This sewage is treated at the City of Watertown's waste treatment plant. DANC developed, owns, and operates the Watertown to Fort Drum Sewer Line, which serves Fort Drum and four Town sewer districts serving the three Towns of Champion, LeRay, and Pamelia. It is worth noting that a small area of the Town adjacent to the Village of Evans Mills utilizes the Village's sanitary sewer system. A map of existing sewer and water districts in LeRay is included on the previous page.

Table 6. National Recreation Field Standards

Facility Type	NRPA Standard (per number of residents)
Baseball Field	1 per 3,000
Softball Field	1 per 3,000
Basketball Courts	1 per 5,000
Football Fields	1 per 20,000
Golf Courses (Number of holes)	18 holes standard per 5,000
Picnic Shelter	1 per 2,000
Playgrounds	1 per 2,000
Soccer Fields	1 per 10,000
Swimming Pools	1 per 20,000
Tennis Courts	1 per 2,000
San Volleyball Courts	1 per 5,000

Source: National Recreation and Park Association (NRPA)

Local Libraries

Evans Mills Public Library is located at 8706 Noble Street in the Village.

In the Village of Black River, the Sally Ploof Hunter Memorial Library is located at 101 Public Works Drive.

US Army Post Library is at 4300 Camp Hale Road on Fort Drum.

Recreation Needs

According to the National Recreation and Parks Association (NRPA) standard, ten acres of park and recreation related open space should be provided for every 1,000 people, While this standard has been used for years by many municipalities, recreational planners are now recommending that communities use the standards as a starting point and determine what the specific recreation needs are for their area. When this standard is applied to the Town of LeRay, with a Town 2020 population outside of Fort Drum of 9,678 residents (including the two villages), the minimal amount of park and recreation open space recommended is approximately 100 acres. With Evans Mill's Jack Williams Park (10 acres) and Black River's Maple Street Park (15 acres) and

Overlook Park (half acre) plus Kanik Trail (8.6 acres in LeRay) and Coyote Flats (70 acres in LeRay) it has a total of 100 acres not counting Fort Drum facilities.

While there is a lack of Town-owned recreational acreage, with village parks and trail systems, as well as the other public purpose properties such as James Cox Memorial Field and Fort Drum trails and parks including Remington Park, the Town residents have a number of active and passive recreation options.

According to the National Recreation and Park Association (NRPA), playgrounds are the chief center of outdoor play for children up to twelve years of age. They also offer some opportunities for recreation for younger adults and families. Playlots should be provided for preschool children up to six years of age, primarily in conjunction with multi-family developments and where desirable, in single-family neighborhoods which are remote from elementary schools.

It is recommended by the NRPA that three acres of playgrounds and/or playlots be provided for every 250 families. According to the Census Bureau, there were 2,035 Families in the Town outside of Fort Drum which equates to about 24 acres.

American Community Survey data (2016-2020) released by the Census Bureau, there were 640 families in the Town outside the villages, and 510 families between the two Villages. In the Fort Drum CDP there were 2,850 families, with Calcium's CDP had a total of 885. Therefore, there should be around 6 acres dedicated in the Town, 6 acres in the Villages, and 10 acres in Calcium CDP.

Playfields are multipurpose recreation areas, primarily for the use of adolescents and young adults. They often include athletic fields for such organized sports as baseball, football, soccer, and track while playgrounds for the use of smaller children are also often included on the same site. Per National Recreation and Park Association standards, three acres of playfield space should be provided for each 1,000 persons served. According to this standard, there should be approximately 30 acres of playfields provided within the Town/Villages. Currently there are playfields in multiple locations but more may be needed based on program demand.

Individual standards per field type are another way of looking at potential need for certain fields in the area. The National Recreation and Park Association is the primary source for such standards and are illustrated in Table 19. However, local priorities for facilities should also be considered. Of note: there have been concerns expressed that our youth field sports programs are in need of additional fields. At this time a review of the need for an additional youth soccer field or fields would be appropriate. Any new field or fields could also be available for other youth sports (i.e. lacrosse, field hockey).

Table 7. LeRay Population/Families by Town Area

Population by Town Area	2020
Calcium CDP	3,573
Fort Drum CDP	15,896
Evans Mills (V)	678
Black River (V) LeRay only	801
Rest of Town (outside CDP & Villages)	4,626
LeRay total	25,574

FAMILIES by Town Area	2016-2020 Est.
Calcium CDP	885
Fort Drum CDP	2,850
Evans Mills (V)	120
Black River (V) LeRay part	390
Rest of Town (outside CDP & Villages)	640
LeRay total families	4,885

Contents

Introduction

The Fort Drum Military Installation, Wheeler-Sack Army Airfield and the Watertown International Airport continue to be major contributors to the local, regional and state economy. As major drivers of employment and direct spending, land use compatibility should be a priority for the communities surrounding these community, regional and statewide assets. This chapter provides an overview of the compatibility issues within the Town of LeRay regarding Fort Drum training ranges, Wheeler Sack Army Airfield deployment and training flight maneuvers as well as the Watertown International Airport daily flights and training.

Some issues of compatibility may affect the training ranges, aerial training activities and/or both airports. Sources for the information include the Fort Drum Joint Land Use Study (JLUS) completed in February of 2018 and Watertown Airport Master Plan and FAA advisory circulars published periodically.

Fort Drum Military Installation

Fort Drum hosts training activities year-round and deployment for its approximately 15,000 soldiers, as well as other visiting soldiers who come to train there including reservists. Fort Drum consists of 108,733 acres with 70 training areas including 47 live-fire ranges and 18 major training areas. Primary focus is on three functions: ranges for weapon training, maneuver areas to train on varying terrain and landscapes, and built-up areas to train in an urban environment.

Besides Wheeler-Sack Army Airfield, most of the development on Fort Drum is contained within the cantonment area. The cantonment area contains the installation's housing and lodging units and support facilities, including the Garrison Headquarters, administrative buildings, vehicle maintenance facilities, barracks, classrooms and educational amenities, as well as recreational facilities. It contains 10,434 acres of land, roughly 3,600 acres of which are local training areas.

Wheeler Sack Army Airfield

Wheeler-Sack Army Airfield (WSAAF) is an Army Power Projection Platform (AP3) and contains 1,930 acres of land immediately northeast of the cantonment area. The airfield was significantly expanded in 1997 after the Defense Base Realignment and Closure (BRAC) Commission recommended the deployment mission at Griffiss Air Force Base in Rome, New York be realigned to WSAAF at Fort Drum. This airfield currently has three fixed-wing aircraft runways, one 10,000 feet in length, and several locations for rotary-wing aircraft (helicopters). There is also a launch and recovery runway used by Tactical Unmanned Aerial Vehicles (UAV). The air traffic control tower operates 24 hours a day, seven days a week and utilizes Army Radar Approach Control for enhanced functionality. The airfield, aviation ranges, and surrounding airspace are used by the Army, Air Force, Air National Guard, Marine Corps, and Navy for various training missions.

Fort Drum Military Compatibility

Compatibility, in relation to military readiness, can be defined as the balance and/or compromise between community and military needs and interests. The goal of compatibility planning is to promote an environment where both entities can coexist successfully. The Fort Drum JLUS identified 25 Compatibility Factors or issues to consider in the

region, a number of which are relevant within the Town of LeRay:

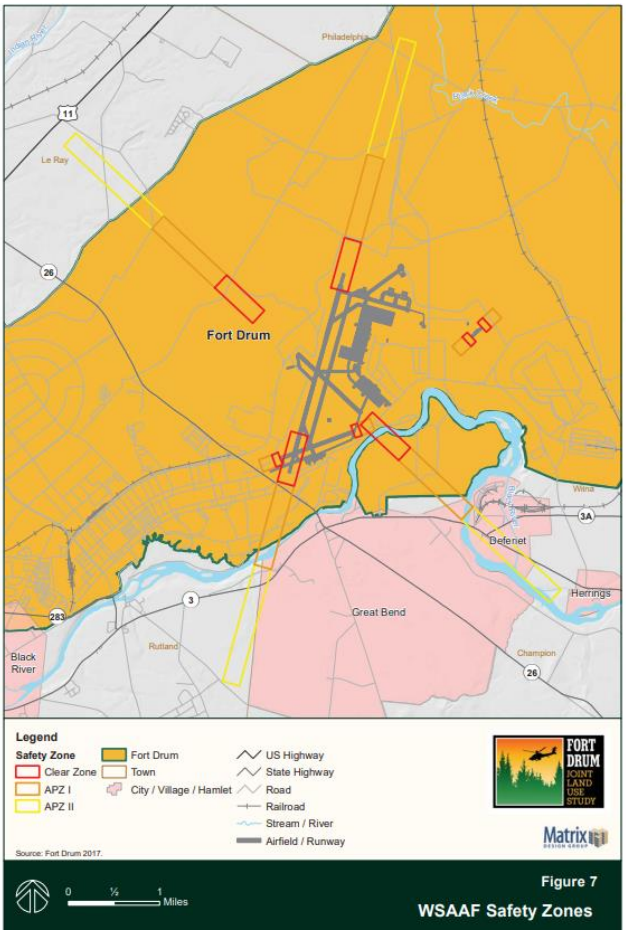
Table 8. DOD - COMPATIBILITY FACTORS	
AQ - Air Quality	**LU** - Land Use
AT - Anti-Terrorism/Force Protection	**LEG** - Legislative Initiatives
BIO - Biological Resources	**LG** - Light and Glare
CA - Climate Adaptation	**MAR** - Marine Environments
COM - Communication/Coordination	**NOI** - Noise
CR - Cultural Resources	**PT** - Public Trespassing
DSS - Dust/Smoke/Steam	**RC** - Roadway Capacity
ED - Energy Development	**SA** Safety Zones
FSC - Frequency Spectrum Capacity	**SNR** - Scarce Natural Resources
FSI - Frequency Impedance/Interference	**VO** - Vertical Obstructions
HA - Housing Availability	**V** - Vibration
IE - Infrastructure Extensions	**WQQ** - Water Quality/Quantity
LAS - Land/Air Space Competition	

For more information regarding any of the Compatibility Factors, please refer to the Fort Drum Joint Land Use Study on the DANC website: https://www.danc.org/fort-drum-compatiblity

Further analysis reveals Fort Drum Military Compatibility Areas (MCAs) and Military Influence Areas (MIAs) identify geographic areas where Fort Drum operations may impact local communities and vice versa. The term MCA is used to identify locations within Fort Drum's operational footprints (noise and airfield safety) around the installation where specified land uses are either compatible or incompatible with the type of operations. The term MIA is used to identify broad areas around Fort Drum that are influenced by operations at the installation, where certain types of land uses could impact Fort Drum operations, such as causing vertical obstructions or interfering with radar systems. There are two MCAs and two MIAs. The MCAs are Safety and Noise, while the two MIAs include Airspace and Radar.

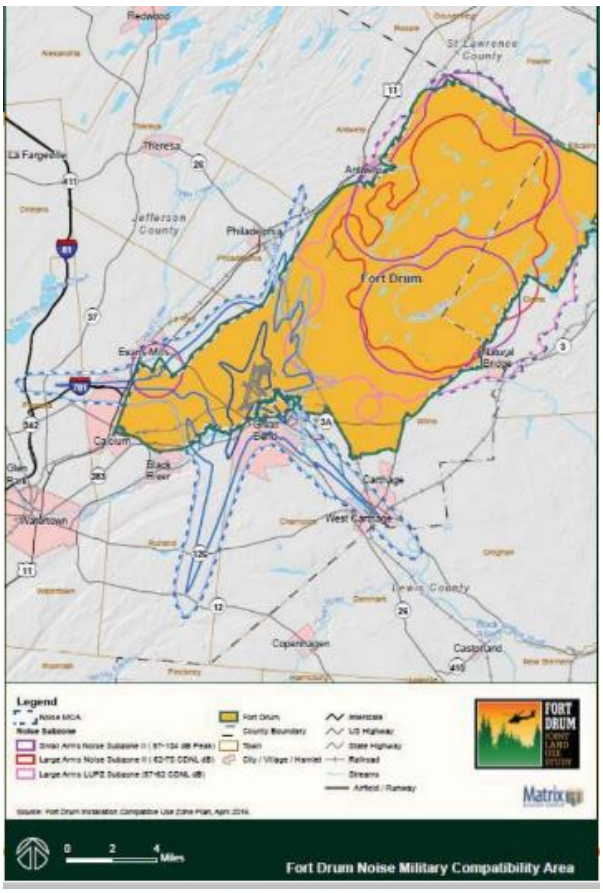
Wheeler Sack Army Airfield – Safety Zones

The Safety MCA endorses compatible land use types and densities/intensities within the clear zones (CZ) and Accident Potential Zones (APZ) I and II at the end of Wheeler-Sack Army Airfield (WSAAF) runways. The location of each CZ and APZ is based on airfield layout and air operations. It overlay's portions of the Town of LeRay near Evans Mills and to the east of the Village of Black River (V), as well as other towns/villages/hamlets.



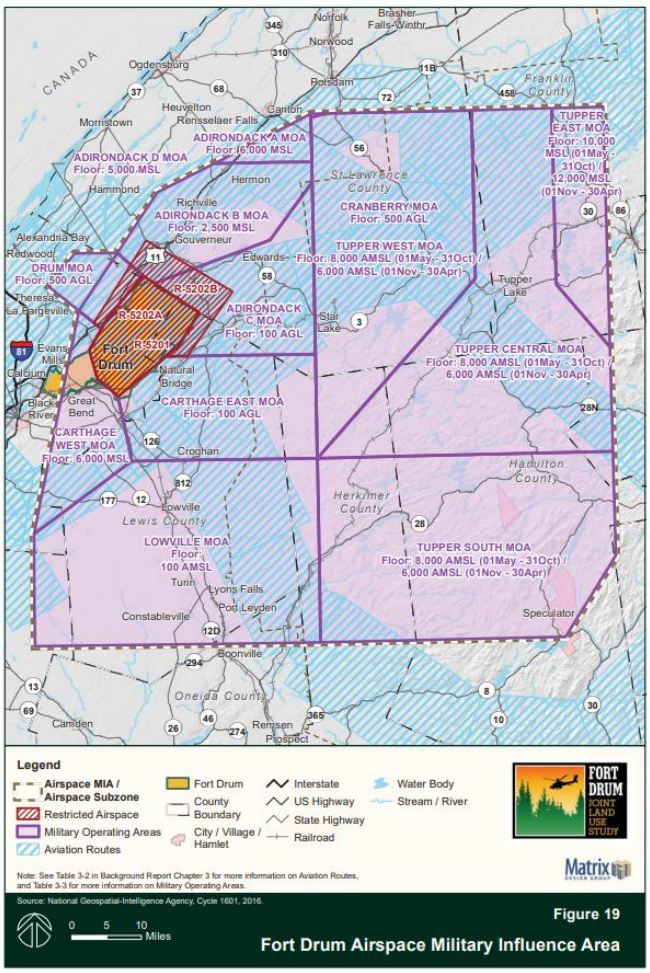
Training Area and Airfield related Noise

The Noise MCA includes all land located off-installation within Fort Drum's modeled noise contours for small arms weapons, large arms and demolitions, and aircraft activity at WSAAF. It overlays portions of the communities of LeRay, Evans Mills, Black River, Calcium within the Town. Other municipalities include Fowler, Antwerp, Great Bend, Philadelphia (T & V), Rutland, Champion, Deferiet, Wilna, Natural Bridge, Carthage and West Carthage, and Diana. Residential and other noise sensitive land uses within this MCA may be recommended to consider sound attenuation measures to reduce interior noise impacts and achieve a maximum interior sound level of 45 dB DNL. Without proper sound attenuation to reduce interior sound levels, uses such as residential and other noise sensitive groups, including schools, healthcare facilities, and churches are considered incompatible with areas that experience noise levels of 65 dB DNL or greater.



Airspace

The Fort Drum Airspace Military Influence Area (MIA) is composed of the special use airspace, Military Operating Areas (MOAs), restricted airspace, and Military Training Routes (MTRs) around Fort Drum. An MOA is airspace designated to separate or segregate certain non-hazardous military activities from Instrument Flight Rules (IFR) traffic and to identify for Visual Flight Rules (VFR) traffic where military activities are conducted. Military Operating Areas consist of airspace of defined vertical and lateral limits established to separate certain military training activities from IFR traffic. Military Training Routes (MTR) allow the military to conduct low-level, high speed training. The purpose of developing and charting MTRs on maps is to make non-participating aircraft aware of the presence of high speed military air traffic in the vicinity. An MTR is a defined volume of airspace designed for use by a military aircraft. Aircraft in MTRs are authorized to and usually exceed airspeeds of 250 knots. Restricted Airspace



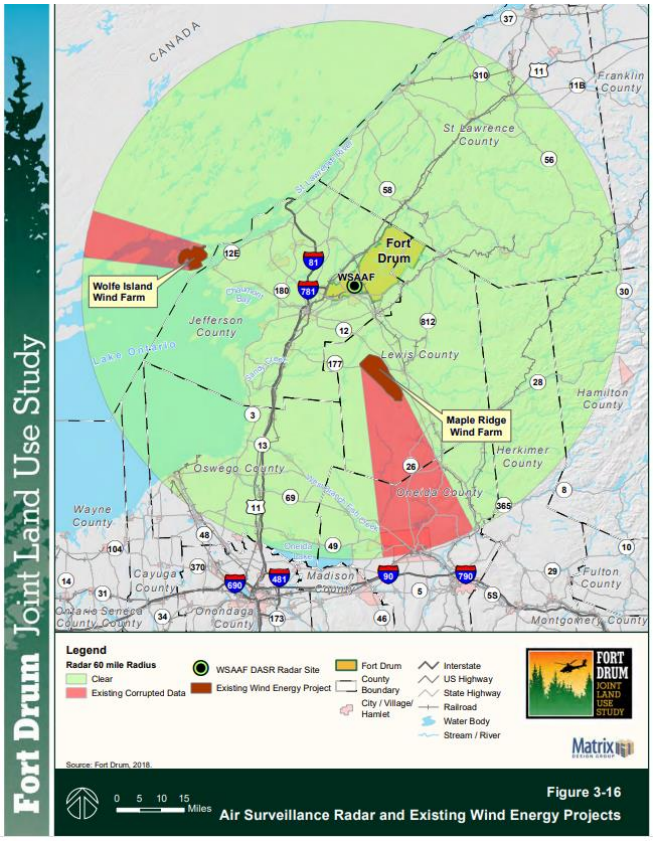
designates areas where ongoing or intermittent activities occur that create usual and often invisible hazards to aircraft. Restricted airspace is specifically designated in areas where flight or ground activities must be confined as they could be considered hazardous to non-participating aircraft. It is **important** to keep these areas clear of vertical obstructions and other hazards to ensure a safe operating environment for military pilots.

Radar Viewshed

There are two types of radar that are operated at Fort Drum. One is operated by WSAAF to monitor and coordinate air traffic at Fort Drum and Watertown International Airport and in the airspace around the installation. The second is the National Weather Service radar that is operated by the Air Force's 18th Weather Squadron, located off-installation in the Town of Montague, Lewis County.

The two facilities have very different missions from each other, but both rely on having clear unobstructed viewsheds to operate properly, requiring clear lines-of-sight in all directions so that they can monitor aircraft, potential threats, and weather conditions. The equipment in each radar is very sophisticated and can experience operational interference by a variety of objects including terrain, tall structures and towers, and wind turbines, all based on elevations and topography differences between the location of the radar and the potential interference.

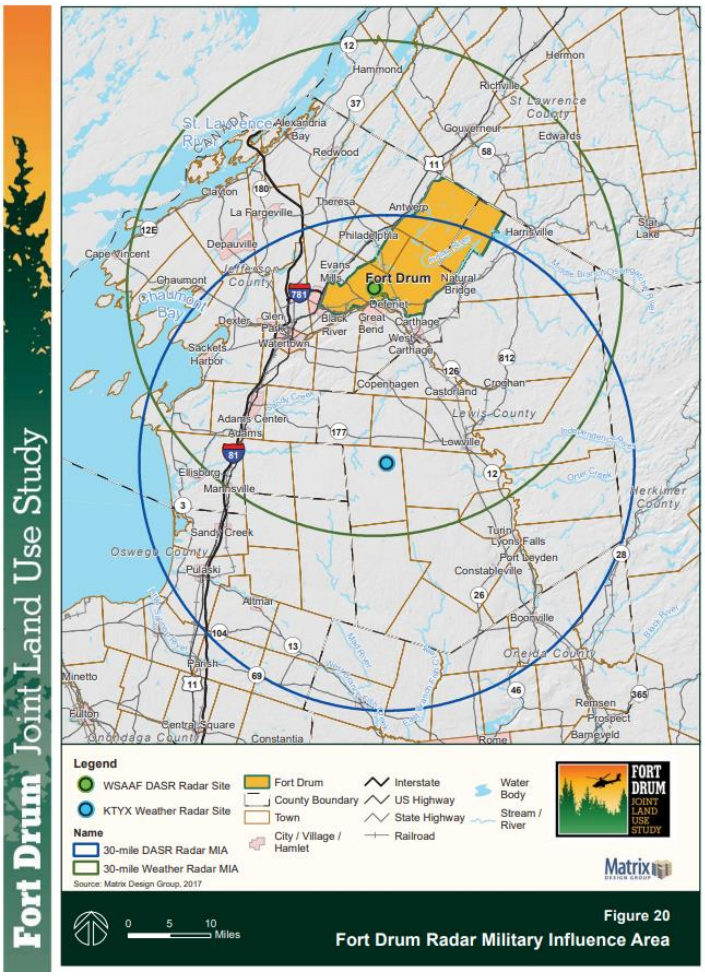
Fort Drum operates an Army Radar Approach Control (ARAC), which is one of only six ARACs in the continental US. The ARAC provides radar air traffic control within an approximately 40- to 60-mile radius around Fort Drum from ground level to an altitude of 10,000 feet mean sea level and provides advisories, sequencing, and separation to Instrument Flight Rules aircraft and Visual Flight Rules aircraft. It also allows for the integration of the National Airspace System, local military training airspace, and R-5201, including providing air traffic services to general aviation aircraft and commercial air carriers traversing through its area of operations. Figure 3-15 illustrates the ARAC's operational area.

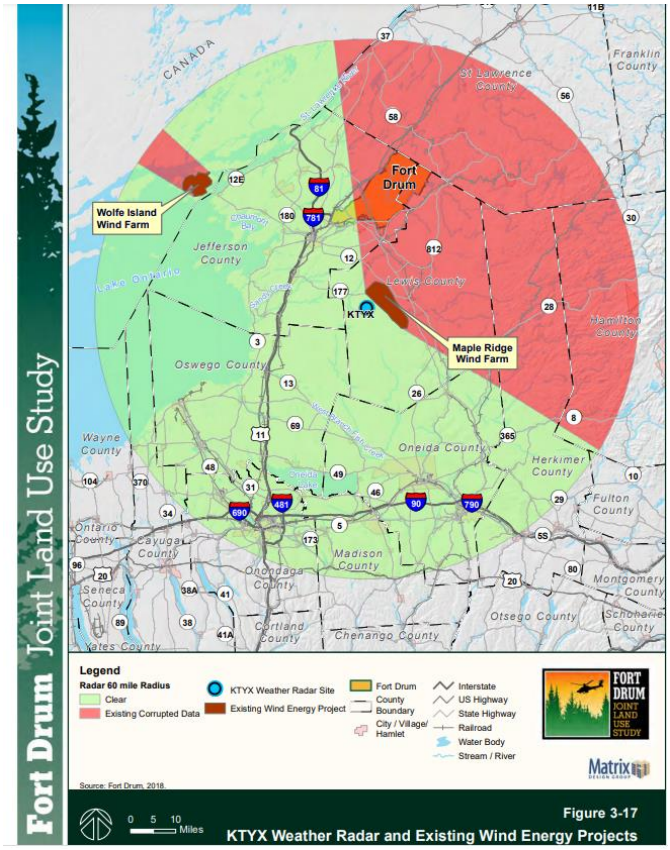


Radar

The Fort Drum Radar Military Influence Area (MIA) is made up of a 30-mile radius around Fort Drum's Digital Airport Surveillance Radar (DASR) as Wheeler-Sack Army Airfield and the Department of Defence-owned WSR-88D Doppler weather surveillance radar (KTYX). Both of these radar provide important operational capabilities for the missions at Fort Drum and can be impacted by various types of development such as tall structures and wind energy development, depending on their locations relative to the radar sites. This MIA serves to provide awareness of areas where certain types of development may impact the radar facilities and where such type of development should be monitored and coordinated with Fort Drum to minimize impacts.

Protecting the radar integrity for both Wheeler Sack Army Airfield and the weather radar are priorities for Watertown International Airport because the Air Traffic Control services for the two airports are provided at Fort Drum Wheeler Sack Army Airfield.





Additional Wind Projects near Radar Sites

Note: the radar maps were created for the JLUS in 2017/2018 prior to the Copenhagen Wind Farm and other more recent phase's completion. Therefore, there may be additional impacts to the Air Surveillance Radar and Weather Radar that may not be reflected on the maps. The maps are provided for illustrative purposes regarding potential impacts to radar systems that Fort Drum depends upon for a number of training, flight and deployment activities.

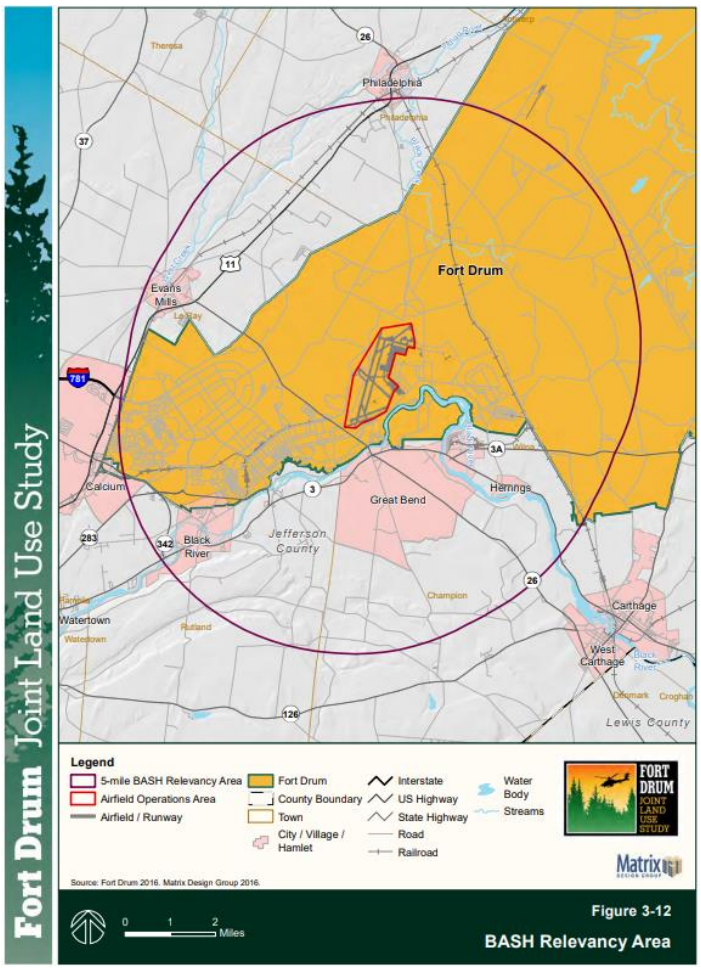
BASH Relevancy Area

Birds and animals can present a significant hazard to military flight operations. While fatal accidents have been limited, impacts can be a safety concern and cause significant damage to aircraft. Between 2001

and 2010 there were 49 reported instances of aircraft-wildlife strikes during Wheeler Sack Army Airfield operations.

Bird Wildlife Aircraft Strike Hazard (BASH) constitutes a safety concern because of the potential for damage to aircraft, property, and potential injury to aircrew and/or the general public if a collision occurred in a populated area. Although aircraft may encounter birds at altitudes of 30,000 feet or higher, most birds fly close to the ground, and over 95 percent of reported bird strikes occur below 3,500 feet above ground level. It is important to note that helicopters are less likely to incur major damage from BASH incidents due to the lower speeds at which they operate.

The primary recommendation made by the Federal Aviation Administration (FAA) is a minimum separation distance between an airfield and wildlife attractants. The minimum separation distance extends **five miles** from the entire perimeter of the airfield operations area, including paved and unpaved areas associated with aircraft movement such as runways, taxiways and aprons. This nontangible area was determined to protect approach, departure, and circling airspace. The minimum separation distance does not include a height restriction as it concerns only terrestrial features.



Certain types of land uses attract birds and wildlife, such as open water areas, standing water, and other natural areas or man-made features such as detention ponds, landfills and certain crops for example.

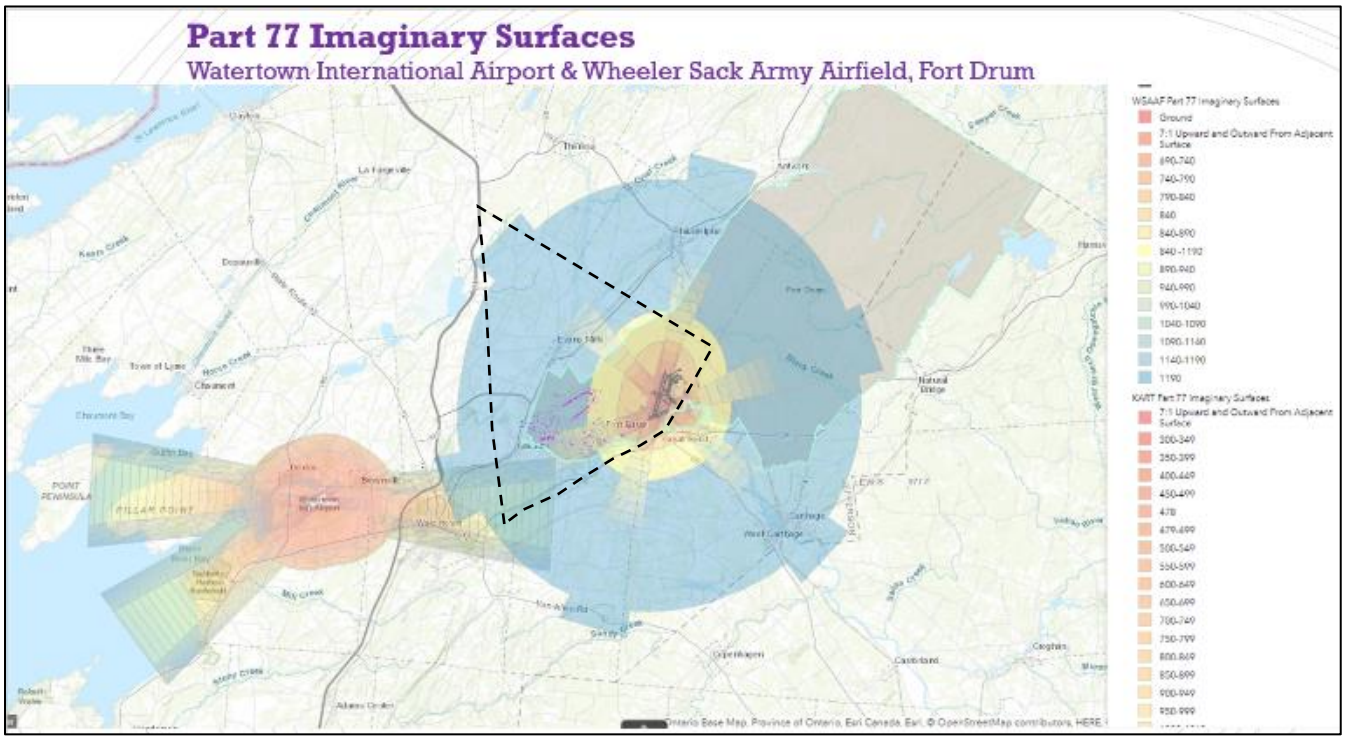
Watertown International Airport

The Watertown International Airport serves as the North County's Commercial Service & General Aviation airport with two commercial flights daily to Philadelphia, PA. The airport serves as an International Port of Entry for US Customs, has TSA Security, cargo service and a business center. The general aviation services include being a private aircraft base with refueling and supply services. It hosts two flight schools based there.

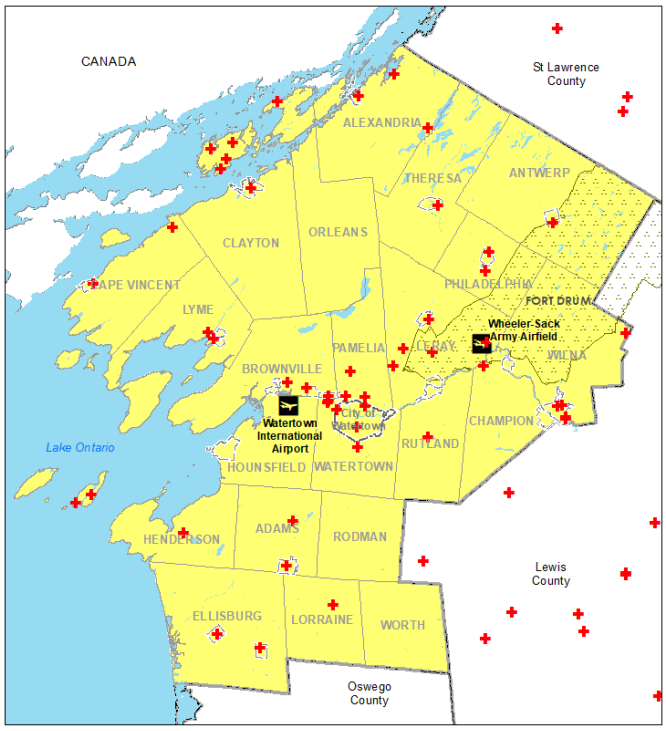
The airport also serves as LifeNet's medivac helicopter base of operations which is a 24 hour a day, seven day a week fully staffed air ambulance service with physicians and nurses to provide care during every flight. LifeNet serves residents and visitors of Jefferson, Lewis and St. Lawrence Counties as well as portions of neighboring counties. There are three landing sites in the Town of LeRay (off-post with two on-post).

Airspace Safety (Part 77 Imaginary Surfaces) near Airports and Helicopter Landing Sites

The primary concern in achieving airport and helipad compatibility involves safety at and around them. Efforts should be made to protect airspace and pinpoint safety risks, helping to minimize the chance of potential accidents. Only certain key areas near airports (and their approach surfaces) and helipads carry this burden and therefore should be



mapped/examined so that communities can implement protection measures. Identifying and protecting specific areas with effective land use controls is essential for the continued safe and efficient operation of the airport and helipads. Therefore, areas around the helicopter land sites should be zoned to allow compatible land uses and structure heights in their vicinity. More information regarding the orientation of the takeoff and landings will inform the zoning update process. In addition, it can help protect the public from a potential aircraft accident.



Major Airports and Emergency Landing Sites for Air Medivac Operations

Helicopter Medivac Landing Site

Airport

0 2.5 5 10 Miles

Planning Department

Sept. 1, 2020

Sources: Watertown Airport, CSCIC, Jefferson County Real Property, Fort Drum Engineering

Some incompatible structures or uses in unsuitable locations or at heights that coincide with flight paths can potentially cause such conflicts with aircraft pilots. Therefore, areas around both airports at altitudes along the aircraft flight patterns should be free of development or impacts that could pose a hazard to pilots operating planes and helicopters in the airport's regional area. Thus, limiting tall structures related to both airports' Part 77 Imaginary surfaces should be considered.

Wheeler Sack Radar & Weather Radar

Protecting the WSAAF radar and the Weather Radar site integrity are major priorities because the Air Traffic Control tower/services for both airports is provided by Fort Drum Wheeler Sack Army Airfield as

well as tracking of weather events and conditions impacting the safety of flight and training operations.

Light and Glare

Lighting and glare compatibility factor refers to man-made lighting (street lights, airfield lighting, building lights) and glare that disrupts vision. Light sources from commercial, industrial, recreational, and residential uses at night can cause excessive glare and illumination, impacting the use of military night vision devices and air operations. Conversely, high intensity light sources generated from a military area (such as ramp lighting) may have a negative impact on the adjacent community.

There may be many factors that contribute to excess nighttime light that can interfere with nighttime training and night vision equipment. The types of exterior lights used, their distance from Fort Drum training areas and runways, and the times at which they're left on all play an important role in how much ambient light is observed on the installation. Lower wattage light bulbs can be used in downward-pointed (shielded) lighting fixtures, to limit light extension and can also result in lower energy costs.

Fort Drum is fortunate to be located in a largely rural region with limited development that contributes to ambient light. The existing small, low density developments generally have a minimal impact to Fort Drum's Night Vision Goggle (NVG) training, although there are some land uses that produce ambient light that may impair NVG training. Such training also includes flights to and from the airfield, as well as practicing all air maneuvers using NVG. Therefore, future growth and development that results in large lighting sources near the installation such as sizable commercial centers or even car dealerships with large parking lots lit for extended hours, may increase light impacts.

The Fort Drum Growth Management Strategy completed in 2009 outlines some zoning tools and standards that may be utilized to address ambient light, including:

- Shielded lighting,
- Limiting the height of light poles,
- Requiring light fixtures to be directed downwards,
- Containing the dispersion of light,
- Limiting illumination to business hours,
- Adhering to the ground intensity limits (in foot-candles) to reduce ambient glare.

Daytime Glare

Daytime glare from solar projects, buildings with reflective materials, and even large retention ponds can result in potential glint and glare impacts on pilots and the air traffic control tower personnel. Glint is defined as a momentary flash of bright light produced as a direct reflection of the sun, while glare is defined as a continuous source of bright light. The Federal Aviation Administration (FAA) recommends projects undergo a Solar Glare Hazard Analysis to determine potential impacts on pilots, especially on approach to the runway and other maneuvers such as overflights.

Nighttime Army training

As addressed earlier, light and glare also have the potential to impact the use of military night vision devises, nighttime aircraft operations and other sensitive military activities. With the advent of the night vision goggle (NVG) mission requirements in the United States Army, the reserve units also utilize the technology. This includes pilots as well as infantry with night vision goggles.

Other compatibility issues relevant to both airports' approaches, takeoffs and flight patterns: limiting the production of steam/dust that could obstruct visibility of pilots while navigating the area for visual landings and their ability to see other aircraft.

Contents

Agriculture Introduction

Agriculture is an integral part of the Town of LeRay, both historically and currently. Agriculture has defined the Town's Rural Character since the early 1800's. Agriculture has kept much of the Town lands open and green, preserving vast expanses of pastures, cropland, woodlots and wetlands that frame rural areas and homes for all who appreciate it. During settlement, agriculture gave our countryside small clusters/groupings of homes, barns, and miscellaneous support structures scattered throughout the Town and surrounded by open fields, woodlots, and nature.

Today the Town is fortunate to still have that character in many areas, with fields, many lined with forests, and open skies. Certainly residential and commercial growth has flourished in a few areas, but the character in much of the Town, has become a priority for residents and visitors. Single family homes have become scattered throughout the countryside, along highways, and near highway intersections and population centers like Calcium, Evans Mills and Black River. Yes, much of the rural character of LeRay remains intact, visible to its residents and all those that choose to visit. Several barn roofs, church steeples, and silos are still prevalent in the Town and its hamlets and villages. Preserving this character should be a priority.

Maintaining, protecting, and enhancing this agricultural and rural residential pattern is a priority to the Town's current and future quality of life. The history of the Town is deeply intertwined with agriculture; farming was one of LeRay's and much of Jefferson County's way of life when the Town/County was first settled. Agriculture remains one of the more unifying components of the Town's economy, heritage, and culture from its settlement to today.

From the Town's inception, LeRay's farms and businesses drove early population growth with not only subsistence farming but also sawmills, grist mills, and stores. Later, a wool mill, clothier, tannery, distillery, potashery, wagon shop, general store, two taverns and a doctor's office were major supporters of the continued growth and prosperity.

In the 1850s Le Raysville, a commercial center located in what's now the Fort Drum Military Installation, declined after James LeRay moved back to France in 1832, and three years after that the land office was moved to Carthage as noted in the brief history section. This decline accelerated when the railroad was built through the western portion of LeRay and eventually in the 1870s the completion of the transcontinental railroad led to certain types of food production shifting west nationally, leading to a decline in local farms for some staples.

By the late 20th Century, however, more modern dairy equipment led to additional changes on local farms. These improvements and lower prices for products led a trend toward larger farms (with more milk cows per farm for example) but fewer farms as large farms purchase or lease small farms' remaining cattle and agricultural land to maintain profitability.

This has continued in Jefferson County for the last few decades, generally dairy farms have continued to trend towards fewer, larger farms. Often operators of smaller dairy farms retire or leave the industry and sell their farmland to larger farms. Sometimes owners sell their cows and equipment, then work for the new owner to supplement their retirement. Some dairies are diversifying into other livestock such as beef or hog production, along with dairy. This allows the farm to use rejected feed from the dairy cattle to feed other livestock. Other County trends

include more farms selling some of their own products, either at roadside stands, or some of their livestock operation (protein) as live animals being processed locally or regionally for individuals who purchase directly from the farm for household consumption. Some are now being licensed to sell raw milk or getting it pasteurized and selling it from the farm.

Recently, the Town has witnessed a resurgence of agricultural activity, with Amish farms being re-established on marginal lands in a number of areas. Hobby farms and organic farms have also led to some additional smaller agricultural operations.

Cost of Community Services

Communities sometimes evaluate the impact of growth on local municipal budgets. Many municipalities believe that residential development benefits the fiscal health of the community and that it will lower property taxes. Others view farmland as a land use that should be developed to a higher and better use as residential or commercial property. However, a variety of fiscal impact studies done throughout New York State have shown that residential development is a net fiscal loss and that maintaining land in farming is fiscally beneficial. It is also a critical part of community character and open space maintenance.

A Cost of Community Study (COCS) is a form of fiscal impact analysis that helps communities measure the contribution of agricultural lands to the local tax base. Farmlands may generate less tax revenue compared to residential, commercial, or industrial properties, but they also require little infrastructure or public services. Multiple COCS studies done throughout the state show farmlands actually generate more public revenue than they receive back in public services, according to the American Farmland Trust, Fact Sheet on Cost of Community Services. COCS not only show that there is a high cost of residential development, but that agricultural land uses offer fiscal benefits similar to commercial and industrial land uses. "In nearly every community studied, farmland has generated a fiscal surplus to help offset the shortfall created by residential demand for public services. This is true even when the land is assessed at its current, agricultural use."

The median cost per dollar of revenue raised to provide public services is $0.29 for commercial and industrial uses, $0.35 for farmland and open lands, and $1.16 for residential land uses. This means that for every $1 collected in taxes by a municipality from a particular type of land use, it costs either a larger or smaller amount to provide public services back to that same land use. For example: for every $1 collected in taxes the median cost is $1.16 to provide municipal services to residential users. But for farmland, the cost is 35 cents. For commercial and industrial users, the cost is 29 cents.

While there have been no COCS studies done in Jefferson County to compare, the exact dollar and cents figures change from location to location. But studies both within New York State, as well as other locations within the United States, show a great amount of consistency in the general results: agricultural land uses are key to a community's fiscal health.

Prime Ag Soils

Successful agriculture depends on good soils. High quality soils require less fertilizer and nutrients for growing crops. Farms with higher quality agricultural soils typically have lower costs and higher production rates. Prime farmland soils produce the highest

yields of food, feed, forage, fiber, and oilseed crops, while soils of statewide significance are important to agriculture in the state, but exhibit some properties that do not meet prime farmland criteria, such as seasonal wetness or erosion. Both of these soil types (prime farmland and farmland of statewide significance) are considered the most productive soils for farming.

Table 9. Priority Farm Soils, Town of LeRay

	Land Acres (non-water)	Percent Prime Farmland	% Prime Farmland if Drained	% Soils of Statewide Importance	Total % All Farm Soils
Town of LeRay	47,304	22%	10%	26%	58%

Source: Jefferson County Farmland Protection Plan, 2016

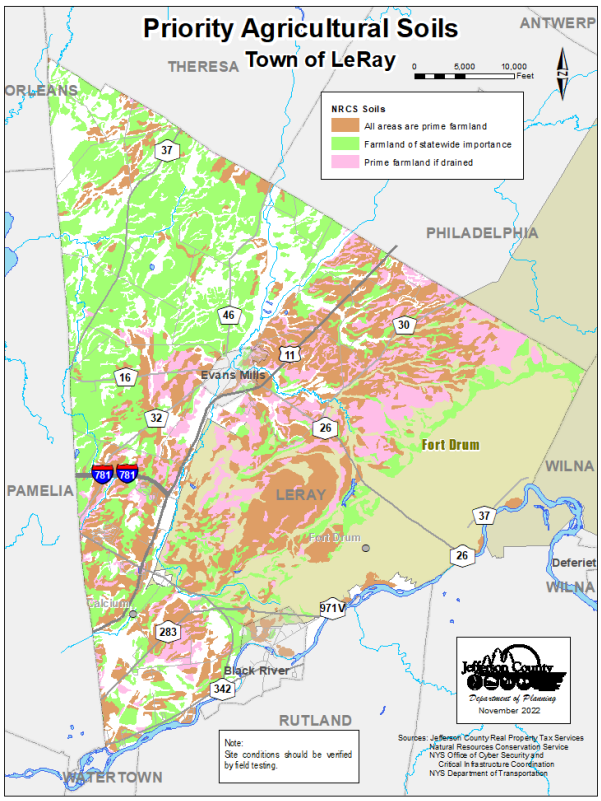
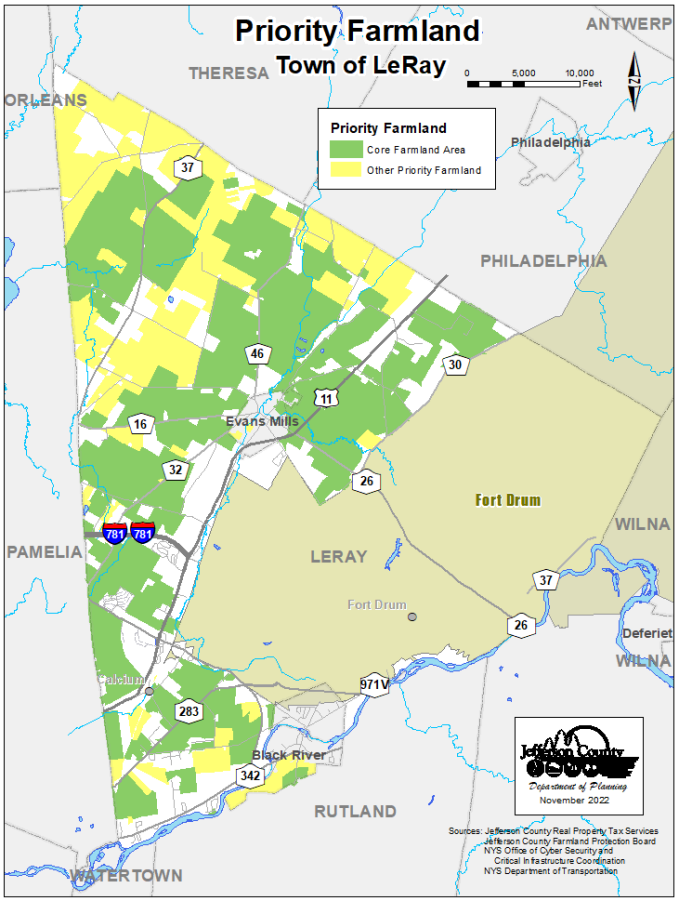


Table 20 indicates 58% the land within the Town contains prime farmland soils or soils of statewide significance as illustrated on the Priority Agricultural Soils Map.

Prime farmland soils shown in brown are generally located along US Route 11 and NYS Route 283, with small pockets located throughout the rest of the Town. Soils of statewide significance as shown in green are plentiful throughout the west and northwesterly portions of Town and also scattered within the other areas.

Priority Farmland Map

While all of the farmland identified in the Jefferson County Farmland Protection Plan should be considered a priority, as far as preservation efforts are concerned, there is a select, core area that is of special concern. The Farmland Priority Map shows pertinent special Core Areas that the Jefferson County Agriculture and Farmland Protection Board considers critical to the continued economic



vitality of the agricultural industry in Jefferson County. These core areas, symbolized in green on the map, deserve extra attention beyond preservation efforts, especially when local or regional projects will or could have a major impact on their continuation as farmland.

Is LeRay Farm Friendly?

Part of the 2016 Jefferson County Agricultural & Farmland Protection Plan process examined the Towns throughout Jefferson County to gauge how farm friendly their Comprehensive Plans were as well as their zoning law. What follows is the Farm-Friendly Criteria rating how well the current plan update might perform.

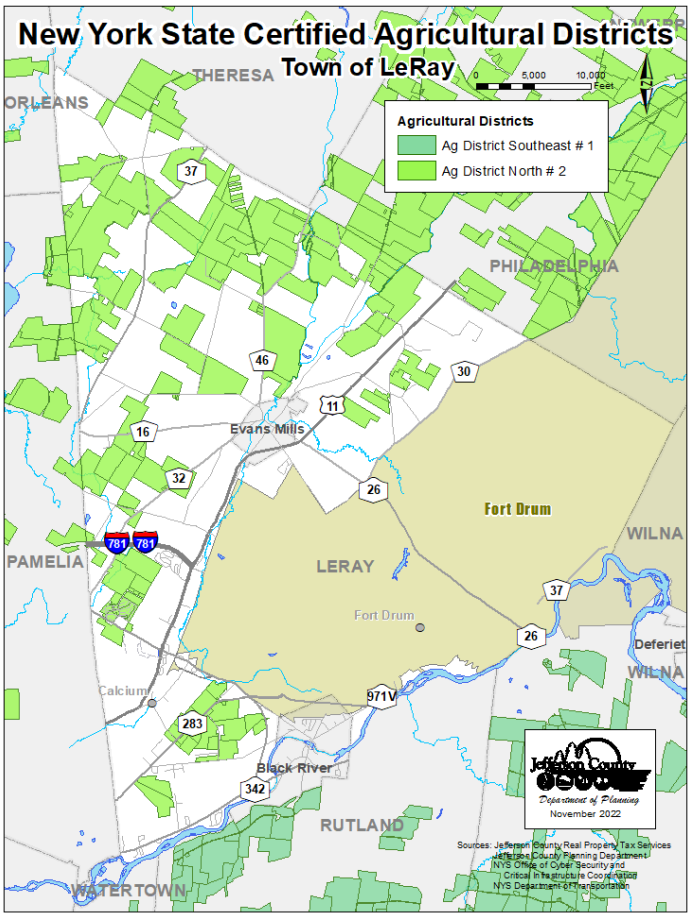
For the purposes of this Comprehensive Plan Update, the vision statement, agricultural section here and the Land Use Chapter address many of the Farm –Friendly Criteria identified by the Jefferson County Ag and Farmland Protection Plan 2016 (Table 10).

Table 10. FARM-FRIENDLY	LERAY	
Comprehensive Plan Criteria	Yes, Whole or Partly	No, or Doesn't Address
Does the plan have a section on agriculture?	YES	
Does the plan include maps of agricultural districts, etc?	YES	
Explaination about the role of agriculture in the community? I.e. did a survey include questions about agriculture? Was there anything in workshops about it?	YES, open space question and maps in the workshop	
Does the vision statement or goals address agriculture to the community in the plan? Is there any visible demonstration of the value of agriculture to the community in the plan?	YES	
Does the plan consider agriculture as an important resource in the plan?	YES	
Does the plan include any data on farms and farmland? Acreage? Income or occupations from farming or other related demographic data?	YES	
Does the plan establish policies toward farmland and farming?		
Does it identify the value of farmland and farms to the community?	YES	
Does it offer any recommended actions related to farming or farmland or ways to preserve or enhance farming?	YES, preserve the viability of farming	
Does the plan establish a policy and/or future actions for the agricultural use of open space that may be created in a conservation subdivision or clustering?		NOT AT THIS TIME
Does the plan discuss NYS agricultural districts and how the Town can be supportive of that?	YES	
Does is consider farmland a natural resource and encourage easements or other protections of that land? Is there a policy discussed for PDR, LDR, or TDR?	YES	
Is agriculture a consideration of where growth does or does not take place?	YES	

Source: Criteria from the Jefferson County Ag and Farmland Protection Plan

Certified Agricultural Districts

NYS Agriculture and Markets Law, Article 25AA authorizes counties to create Agricultural Districts that are reviewed and certified by the NYS Commissioner of Agriculture and Markets. These Districts offer participating landowners options to support agricultural operations. These



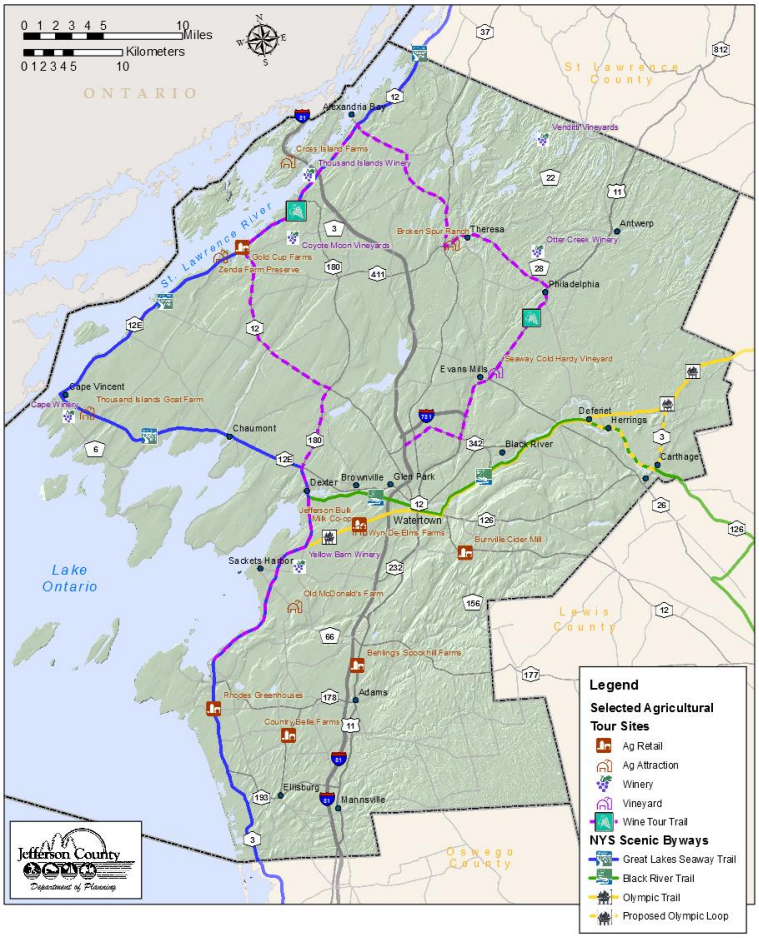
options include: Agricultural Assessment; Notice of Intent; Limitation on use of eminent domain; Benefit Assessments; Restrictive Local Laws; Agriculture Data Statements; and Sound Agricultural Practices. Landowners of operating agricultural operations can apply for a special agricultural assessment which may result in a lower assessment.

If a government agency proposes to take land within a certified agricultural district through eminent domain, then that agency is required to file a Notice of Intent and the project is reviewed by the County Agricultural and Farmland Protection Board to determine impacts on the agricultural operation and agricultural district.

Municipalities are discouraged from passing local laws that place undue restrictions on agricultural operations. As an example, a local junkyard law cannot require that a farmer place all equipment within a structure or behind buffers. When local boards are reviewing projects any farm operation within five hundred feet must be identified and notified of the project and potential impacts on the operation are considered during the review.

As of 2021, there were 8,940 acres of land within a certified Agricultural District in the Town of LeRay as the map on the previous page illustrates.

Scenic Byways and Driving Tours
Jefferson County, New York



Craft Beverage Industry

The Craft beverage industry is booming in New York State, now with 450 wineries, 462 breweries, 186 distilleries and 72 cideries statewide. According to the Empire State Development website (December 2022), New York State now ranks Number 4 in the nation for number of wineries, Number 2 for the number of breweries and Number 3 in the US in wine production and number of distilleries. With 897 farm licensed manufacturers and 1,288 licensed craft beverage manufacturers, the total economic impact of NYS beer alone is $5.4 billion.

Thousand Islands Seaway Trail Wine Tour

Within Jefferson County, the Thousand Islands-Seaway Wine Tour Trail has been

used to promote tourism and vineyard visitation. Seaway Coldhardy Grapes is a nursery that specializes in grapevines suited to the north country winters, located just outside of Evans Mills.

1000 islands Agricultural Tour

The 1000 Islands is well-known for it's on the water attractions, but off the water the region reveals another side of its character. The 1000 Islands Agricultural Tour is a great way to explore the countryside. The region has been long known for its dairy farms and traditional products such as honey and maple syrup. Today, visitors can buy direct from producers of a wide array of agricultural products. Use this Tour to help you make delicious discoveries along our country roads.

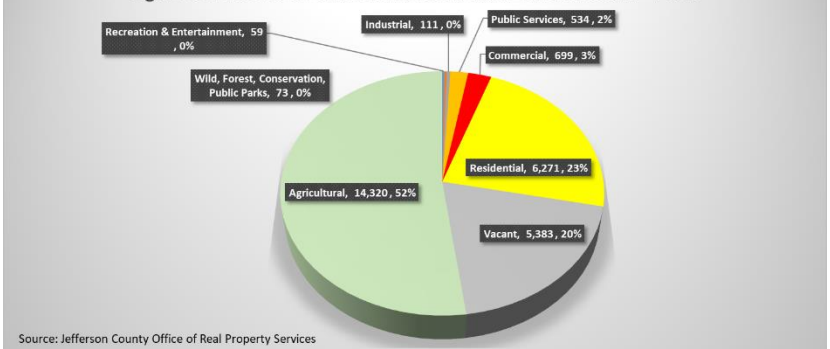
Niche Markets and Smaller Farms

While all farms can't serve niche markets, the increase in demand for locally grown products has led to more local opportunities for small farms and farmers. Amish farms meet this demand as well.

Nationally, there is a movement toward consuming locally raised and organic foods in some cases. More than eight in ten consumers (85%) say they trust smaller-scale family farms to produce safe, nutritious food.

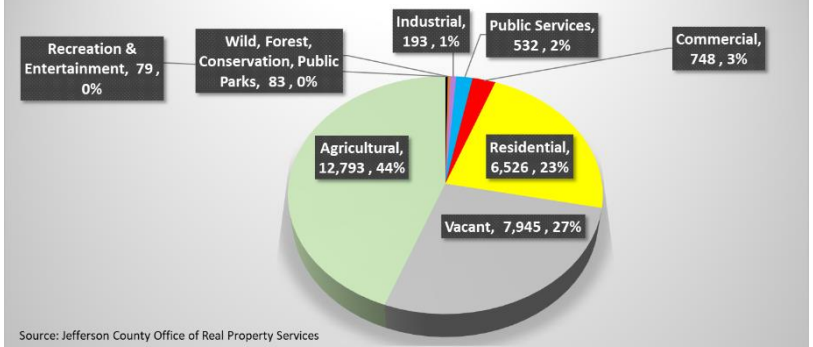
Another recent trend is value-added products. Value-adding takes raw products and increases their value by converting them into a commodity that is saleable long after harvest. Choosing a "value-added" niche product can be an important key to successful diversification. Typical value-adding includes processing in some way such as cleaning, cutting, packaging, smoking, drying, freezing, extracting or preserving. Many food products such as cheese curd and a variety of other cheeses, Croghan Boloney, maple syrup, honey and others are produced and sold locally and beyond.

Figure 37. ACRES of LAND USE BY ASSESSMENT CATEGORY - 2005



Source: Jefferson County Office of Real Property Services
*Note - Community Services was removed from the chart as it included primarily Fort Drum acreage

Figure 38. ACRES of LAND USE BY ASSESSMENT CATEGORY - 2010

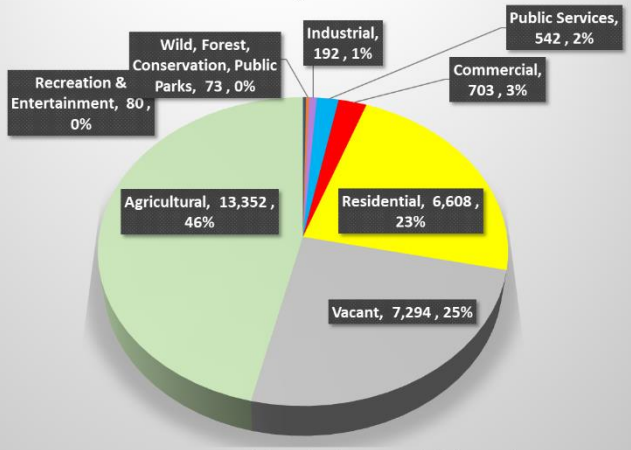


Source: Jefferson County Office of Real Property Services
*Note - Community Services was removed from the chart as it included primarily Fort Drum acreage

Agricultural Land Use

According to the Jefferson County Real Property Services Office, the percent of LeRay assessed as agricultural land in 2022 was 46% (reminder,

Figure 39. ACRES of LAND USE* BY ASSESSMENT CATEGORY
Town of LeRay - 2022



*Note - Community Services was removed from the chart as it included primarily Fort Drum acreage
Source: Jefferson County Office of Real Property Services

Fort Drum land in LeRay was removed from the totals). Land Use typically changes from year to year, but generally agricultural land use by assessment has declined from 2005 making up 52%, 2010 when it made of 44%, and most recently in 2022 with 46%, as illustrated by the three adjacent figures.

Agricultural Land by Assessment

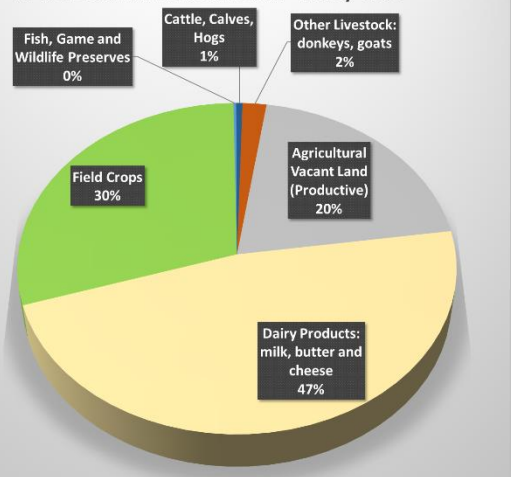
In 2005, LeRay's agricultural land was assessed with nearly half (47%) being using for dairy products: milk, butter and cheese. Since then, Field Crops increased markedly (from 30% in 2005 to comprising 49% in 2022) and Agricultural Vacant Land (Productive) increased from 20% in 2005 to 27% by 2022. Field Crops are defined as hay, corn, oats, dry beans, potatoes and wheat. Agricultural Vacant Land is defined as land used as part of an operating farm usually found with contiguous parcels not used for the other use types. Also of note, by 2022, there appears to be more diversification of the agriculture activities, with other fruits now with 1% - which include strawberries, raspberries, dewberries, and currents, etc. and other livestock increasing to 2% by 2022.

Agricultural Issues/Priorities

Agriculture makes up a large percentage of the local land base and contributes significantly to land use character and quality of life in LeRay. In addition, farmland's net gain in terms of service demands enhances the local town budget. Lastly, agriculture's countywide economic impact/employment demand provide options to settle in the area working on the land. Amish families cherish this way of life and have increased in the Town as well.

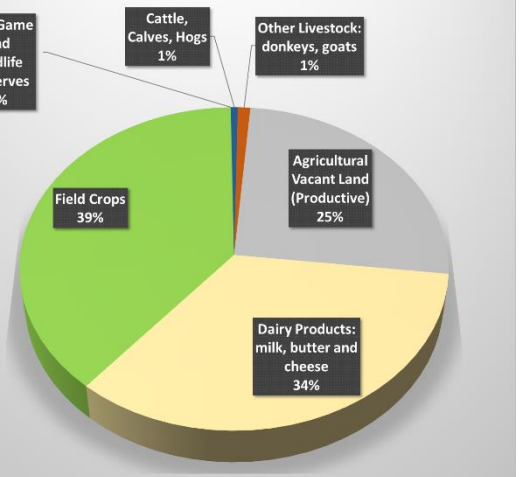
The Town can embrace this major land use for current and future generations or allow a divergence and ultimate loss of farmland as other uses continue to be developed in a

Figure 40. AGRICULTURAL ACREAGE BY ASSESSMENT SUB-CATEGORY - LeRay 2005



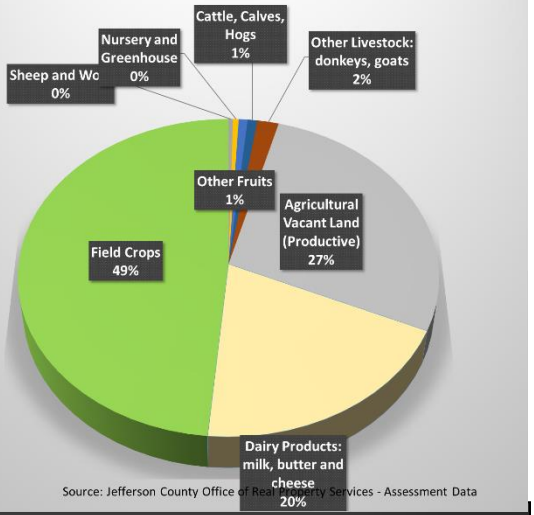
Source: Jefferson County Office of Real Property Services - Assessment Data

Figure 41. AGRICULTURAL ACREAGE BY ASSESSMENT SUB-CATEGORY - LeRay 2010



Source: Jefferson County Office of Real Property Services - Assessment Data

Figure 42. AGRICULTURAL ACREAGE BY ASSESSMENT SUB-CATEGORY - LeRay 2022



Source: Jefferson County Office of Real Property Services - Assessment Data

haphazard way. Reinforcing this agricultural base should be considered a major step toward sustainability and reinforcing the character that many residents often take for granted. LeRay's heritage and character in many neighborhoods is reinforced by farming and should be considered a priority moving forward. Renewable energy projects such as solar energy facilities should be used to augment farm-incomes where appropriate, but not replace them.

Encouraging/supporting small-farms as well as large farms will help preserve the open spaces throughout LeRay that provide the rural quality and openness that many residents cherish.

Contents

Natural Resources - Introduction

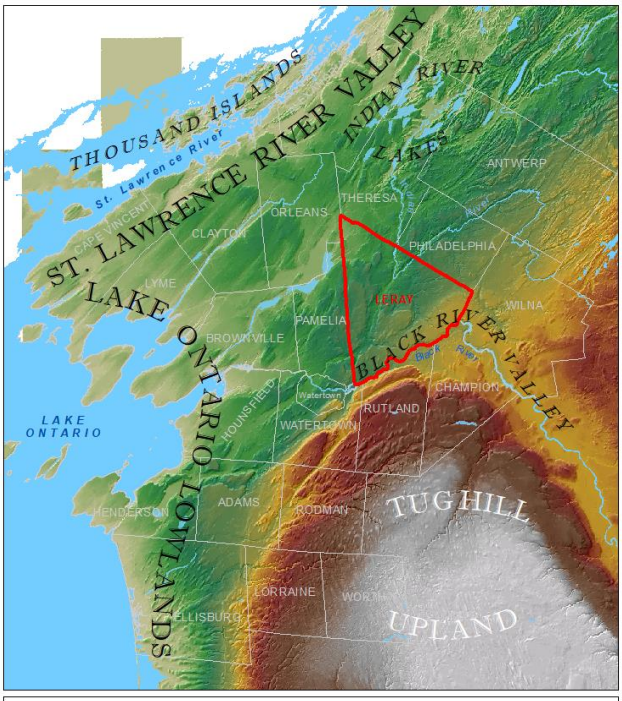
Natural resources are the raw materials that make up the earth. Air, sunlight, water, land, animals, plants, and minerals are examples of these resources. Landforms are features of the landscape such as valleys, plains, hills, ridges, shorelines, and water bodies. Together, natural resources and landforms have a direct impact on community character and how a community develops. Historically, people settled in areas close to water with adequate land for farming and trees for construction and a source of heat. LeRay grew around the access to the Black River and the Villages of Black River and Evans Mills developed due to the power generated by water. The waterfront on portions of the Indian River and the along the Black River developed residentially outside the Village of Black River.

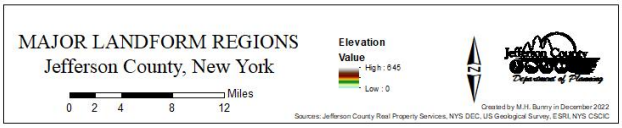
This chapter looks at the existing natural resources such as wetlands, watersheds, soils, topography, and wildlife.

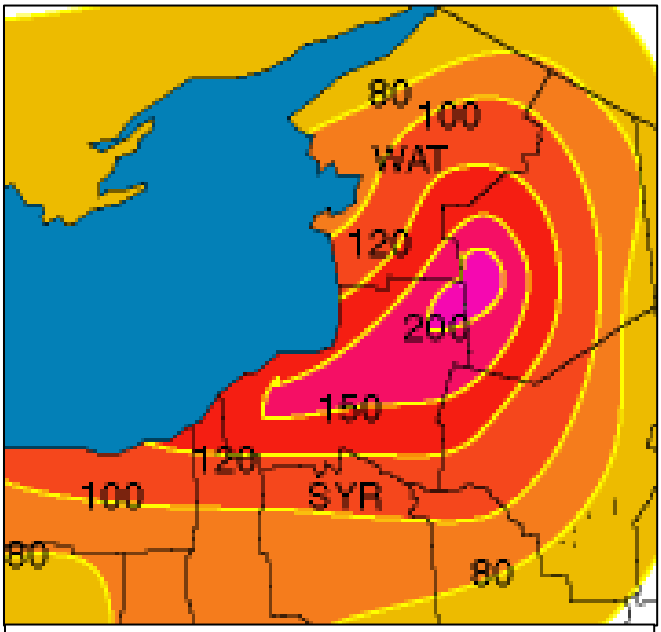
When looking at potential development the community should examine the potential physical impediments to development. The topics discussed here are for general planning purposes. Specific development sites should be researched and reviewed for their own natural resource and landform issues. Potential impacts on endangered or threatened species should be identified and minimized during the local board discretionary reviews where the State Environmental Quality Review Act (SEQRA) process applies.

Regional Setting - Physical Characteristics

LeRay is located in the North Country region of New York State and the Black River Valley in Jefferson County. LeRay lies near the Tug Hill Plateau in close proximity to Lake Ontario, just beyond the Tug Hill and close to the Adirondacks. Elevations in the Town range from a low of 340 feet above mean sea level (amsl) where Gillette Creek exists the Town on the







North Country average snowfall within region

western boundary up to 705 feet amsl in the southeast corner of town within Fort Drum.

Climate

The climate for Jefferson County is characterized as humid-continental. The winters are long and relatively cold; the spring is cool and short; summers are warm and moderate; and autumn is also warm but usually short. The climate is influenced by the proximity to Lake Ontario, particularly during the winter. The relatively warm lake water provides moisture for air masses moving across from the west which then often results in "lake effect" snowfalls primarily in the southern portion of the County but may also impact LeRay. The average yearly rainfall for Jefferson County is 38.2 inches which is above the national average of 36.5. Also the average yearly snowfall for the County is 93.1 inches which is almost 300% above the national average of 25 inches. The County is below the national average for sunny days, 161 days compared to 205 days. January has an average low temperature of 9 degrees and July has an average high of 80 degrees.

Wetlands

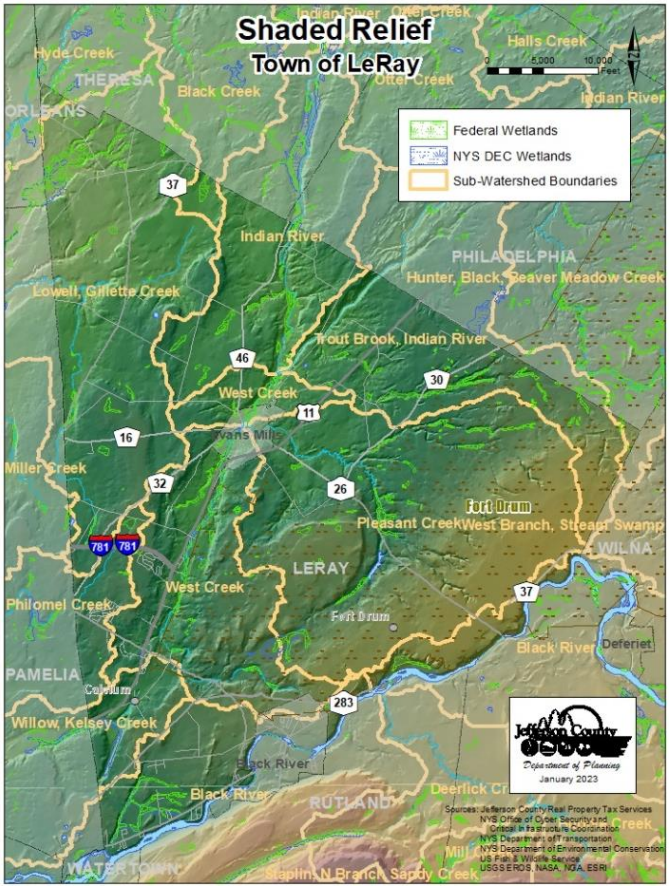
Wetlands are shallow water areas commonly referred to as swamps, marshes, bogs, wet meadows, or potholes. These shallow areas are essential aquatic ecosystems that support many types of vegetation, mammals, reptiles, waterfowl, fish, and rare plants. Typically, wetlands are very productive, contributing greatly to biological diversity. Wetlands are very dynamic in nature and can be vulnerable to human encroachment and damage.

Wetlands also provide flood and storm water control by absorbing and storing rain and snow melt waters, thus minimizing flood damage. They also act as surface and groundwater recharge areas and help maintain important water resources. Wetlands buffer shorelines from erosion and help cleanse waters of pollutants through natural filtration and other processes. The Town of LeRay has approximately 882.9 acres of NYS DEC designated wetlands and 1,746.78 acres federally designated.

Wetlands also are valuable as a habitat for fish, waterfowl, and other wildlife. They are among the most productive ecosystems, providing a forage base for all levels of the food chain including spawning fish, nesting birds and many rare and endangered species. Another value of wetlands is that they provide natural beauty and open space that can often be utilized for education and recreation.

LeRay's Major Watersheds

Much of LeRay is located within the Indian River watershed, consisting of the West Creek, Pleasant Creek sub watersheds that flow into the Indian River from south to north. The Indian River flows mainly as a slow-moving river that begins as a small stream at Indian River Village in Lewis County and flows almost 100 miles to Black Lake in St. Lawrence County. Seventy-five miles of the river is readily canoe-able,



and fishing is good through its length, making it an extremely appealing area to the serious, as well as the casual outdoor enthusiast. The West Creek watershed consists of West Creek, a tributary that flows in the Indian River.

The southern end and western portion of the Town encompasses Philomel and Kelsey Creek sub watersheds that flow into the Black River watershed. The Black River watershed drains approximately 1.2 million acres (1,920 square miles), with its headwaters in the Western Adirondack Park, a state forest preserve, draining northwest through the Tug Hill Plateau and discharging into Lake Ontario, the eastern most Great Lake. The Black River flows east to west consisting of segments of flat water and white water depending on elevation changes, and provides both types of paddling opportunities. Flatwater mainly occurs within the Town with a small exception, and steady white water use occurs to the west in the City of Watertown, through the Villages of Glen Park, Brownville, and Dexter.

The Black River is listed as a class C river by the New York State Department of Environmental Conservation (NYS DEC). A Class C designation denotes waters that are best used to support fisheries. They are also suited for primary and secondary contact recreation, notwithstanding other factors that may in some cases limit recreational uses. As a result, fishing and kayaking are among the most popular water-based activities on these waters.

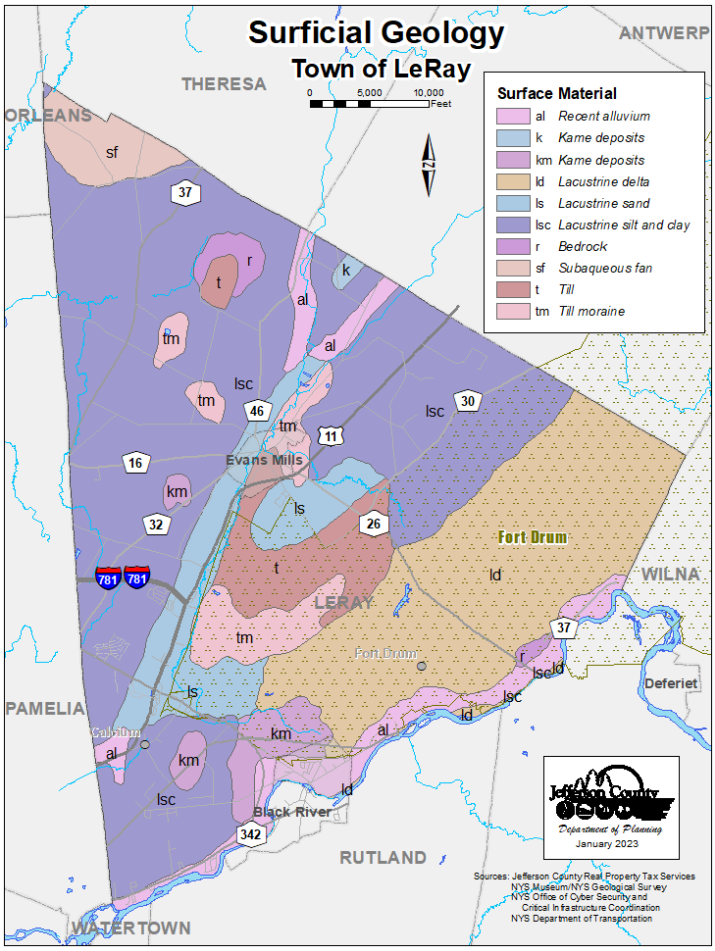
The northwesterly portion of the Town (Miller Creek, Lowell Creek and Gillette Creek) flow into the Perch River which also is a wildlife management area just beyond the Town boundaries. Perch River Wildlife Management Area is a 7,862 acre high quality wetland and open water habitat for bird and waterfowl, et al.

Topography and Geology

In general, the topography within the Town and is generally level with some undulation. As evidenced on the Shaded Relief map, there are some noticeable ridges that help define the area, including ridgelines on the south side of the Black River (in the Town of Rutland), along with some smaller ridges along West Creek and the Indian River.

Surficial Geology

Surficial geology concerns the loose sedimentary materials that overlay bedrock and which are found near the earth's surface. A large portion of the Town consists of lacustrine silt and clay deposits. However, there are a few areas with some Kame deposits and subaqueous fan. There are two Till Moraine deposit areas the larger of which occurs on Fort Drum.



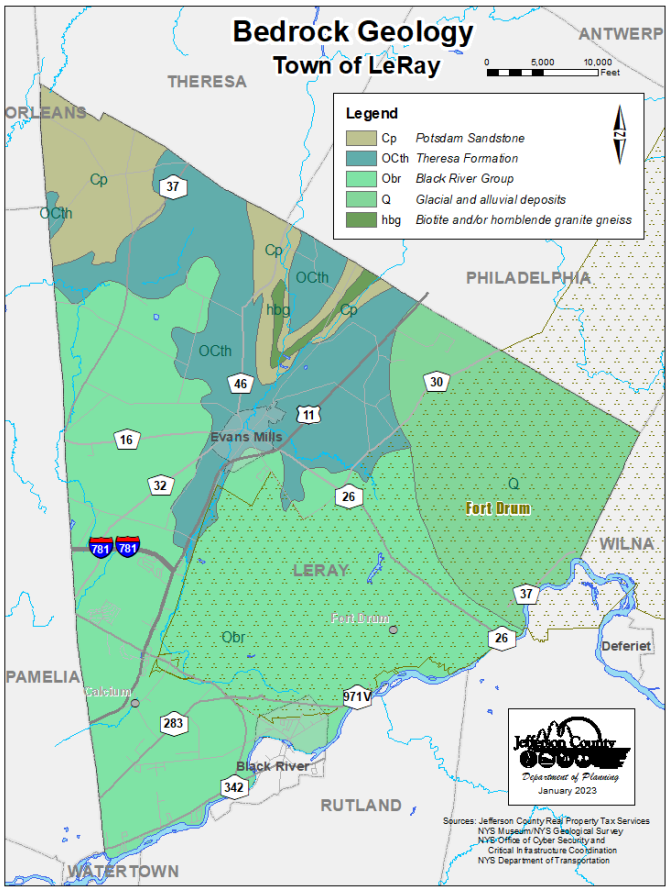
Bedrock Geology

Bedrock geology refers to the physical rock visible underneath the soil, river systems, till, etc. The geological character of the southern and western areas of the Town consists of the Black River Group.

The Black River Group outcrops periodically and contains mainly limestone rocks separated into two formations, the Lowville and the Chaumont. The Lowville Formation is a medium-light to light gray, generally thinly bedded, micritic limestone. The Chaumont Formation overlies the Lowville Formation and contains more massively bedded limestone and basal chert.

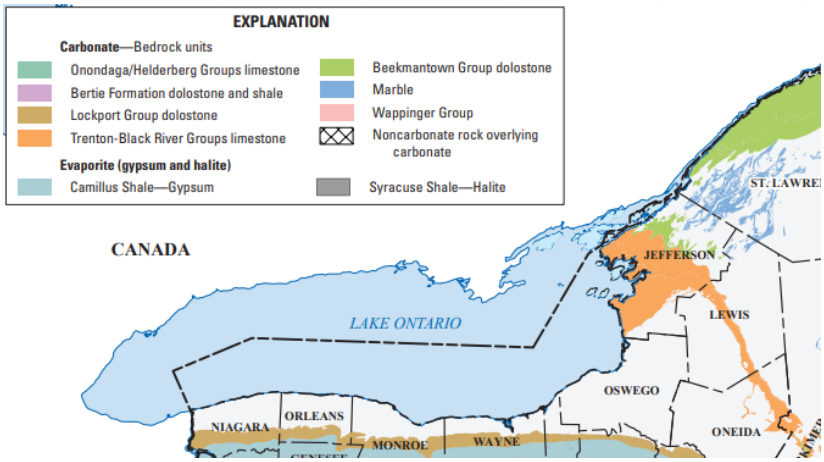
The northern tip of the Town consists of the Potsdam Sandstone formation. The absence of other sedimentary rock in the formation reflects the broad transition from the more predominant and recently deposited limestone (Black River Group) described above.

The Theresa Formation runs along US Route 11 north of the Fort Drum Connector Road 781, through Evans Mills and widens along US Route 11 as it continues north. Theresa formation consists of somewhat calcareous, sandy dolomites with interbedded weak sandstones, especially near base. Thickness is 20 to 70 feet. Very closely related to underlying Potsdam sandstone and formerly included in Potsdam but now separated as distinct formation. The Theresa formation is of Late Cambrian age.



Aquifer recharge/groundwater

Karst is a kind of landscape, and an aquifer type. Karst areas consist of solid but chemically soluble rock such as limestone (most important) and dolomite, but also gypsum, anhydrite and several other soluble rocks. This type of aquifer is vulnerable to contamination due to their hydrogeological properties. Contaminants can easily enter karst aquifers through thin soils or via shallow holes (sinks). Once, inside the aquifer, contaminants can quickly spread over large distances, due to rapid flow in the conduit network. Natural attenuation processes such as filtration and retardation are often less effective than in other aquifers. The Limestone/karst aquifer covers a large portion of the Town (Black River Group).



The Black River Limestone near Watertown is known for young karst development (shallow solutional fractures, sinkholes, and cave systems), especially where these rocks are adjacent to surface water, such as the Black River (Waller and Ayer, 1975). As an example of this type of karst development, a fluorescein dye trace was completed in the Black River Limestone in December 2016 to determine the connection between some small karst features (swallets) and the Black River. The dye took just over 4 hours to move from the swallets to the Black River, a distance of 1,500 ft, and when the dye appeared, its color intensity was not substantially diluted.

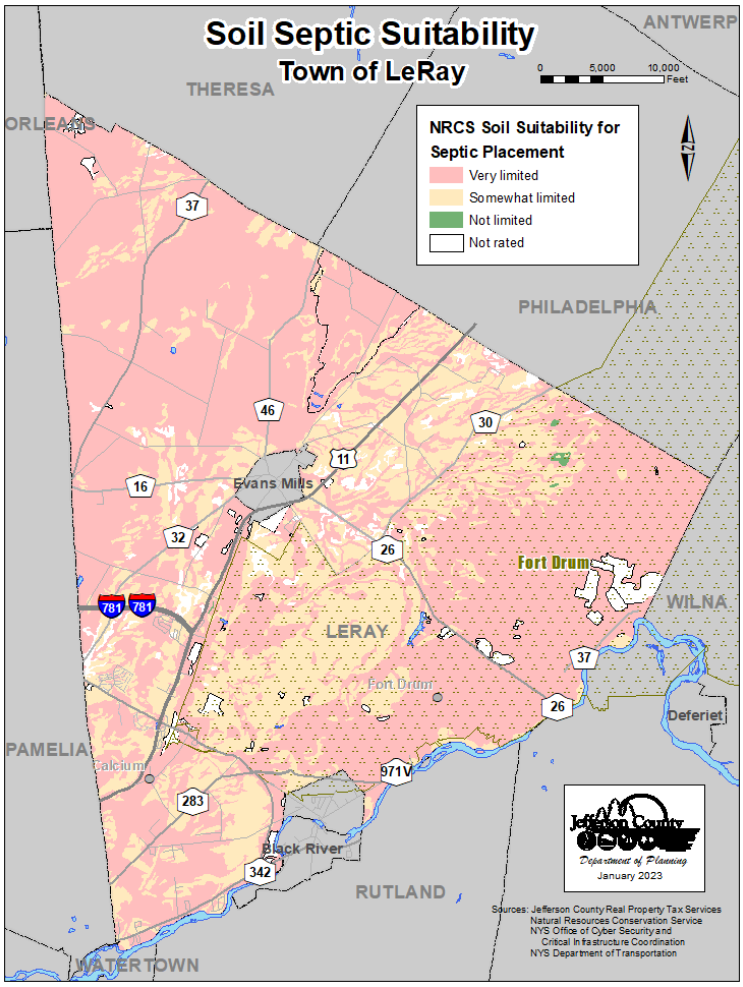
Septic System Suitability

Soils in LeRay, continue to influence development levels throughout the Town. Certain soils or soil conditions present have limitations for buildings and private septic system placement.

Soils in the County have been classified according to their ability to support on-site septic systems by the Soil Survey. Such septic systems consist of septic tank absorption fields in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. The following ratings are based on soil properties, site features, and observed performance of the soils. Permeability, high water table, depth to bedrock or to a cemented pan, and flooding affect absorption of the effluent. Large stones and bedrock or a cemented pan also interfere with installation of individual septic systems.

Suitability is considered *'not limited'* if soil properties and site features are very favorable for the indicated use. Such areas are green on the map. Good performance and very low maintenance can be expected.

Suitability is considered '*somewhat limited*' if soil properties and site features are moderately favorable for the indicated use. The limitations can be overcome by special planning, design or installation. Such areas are light tan colored on the map. Fair performance and moderate maintenance can be expected.



Suitability is considered "*very limited*' if soil properties or site features have one or more features that are unfavorable for the specific use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Such areas are pink or light red on the map. Poor performance and high maintenance can be expected.

Unsatisfactory performance of septic tank absorption fields, including excessively slow absorption of effluent, surfacing of effluent, and hillside seepage, can affect public health. Ground

water can be polluted if highly permeable sand and gravel or fractured bedrock is less than 4 feet below the base of the absorption field, if slope is excessive, or if the water table is near the surface. There must be unsaturated soil material beneath the absorption field to effectively filter the effluent.

On-site tests or investigations must be performed to be certain whether the present soils or soil conditions will support an individual septic system on a given site or project area. Only initially refer to the Septic Suitability Map as a guide, afterwards actual soil tests should be used prior to any investment or purchase decisions. The availability of municipal sewer and/or municipal water should be confirmed.

Flood Plains

Most floodplains are found in low areas adjacent to streams, rivers, lakes and ocean and are prone to periodic flooding. In undeveloped areas, this natural interaction restores soil fertility, recharges groundwater supplies creating unique and diverse habitats.

The Federal Emergency Management Agency (FEMA) has designated 100-year flood zones. This designation does not mean that flooding will occur only once a century. Instead, it means that in any given year, there is a one-in-one hundred chance of flooding. Frequency of flooding is dependent on many factors, including weather conditions and upstream development changes to the watershed.

Flooding is not considered a significant problem within LeRay's waterfront areas. In the Town, the 100-year floodplain mostly surrounds creeks and bays. Specifically, areas within the 100-year floodplain include low areas at West Creek, Willow Creek and Suckers Creek, as well as the Indian River and Black River.

The Town of LeRay is in compliance with the terms of the National Flood Insurance program as administered by FEMA. The Town adopted floodplain regulations to control the location and siting of new construction activities within flood zone areas to minimize damage to property, life, and natural resources.

Table 11. Town of LeRay and Fort Drum - List of Endangered, Threatened, or Rare Species

Common Name	Status	Group	general location
Blandings Turtle	Endangered	Vertebrate Animal	Fort Drum
Common Nighthawk	Rare	Vertebrate Animal	Fort Drum
Black Tern	Endangered	Vertebrate Animal	Town & Fort Drum
Drummond's Rock Cress	Threatened, likely to become endangered	Vascular Plant	Fort Drum
Henslow's Sparrow	Endangered or Threatened	Vertebrate Animal	Town & Fort Drum
Indiana Bat	Endangered	Vertebrate Animal	Town & Fort Drum
Least Bittern	Threatened	Vertebrate Animal	Fort Drum
Northern Harrier	Endangered or Threatened	Vertebrate Animal	Town & Fort Drum
Northern Long-eared Bat	Endangered	Vertebrate Animal	Town & Fort Drum
Pied-billed Grebe	Threatened	Vertebrate Animal	Town & Fort Drum
Red Headed Woodpecker	Rare	Vertebrate Animal	Fort Drum
Sedge Wren	Threatened	Vertebrate Animal	Town & Fort Drum
Short-eared Owl	Endangered or Threatened	Vertebrate Animal	Town & Fort Drum
Upland Sandpiper	Threatened in NYS	Vertebrate Animal	Town & Fort Drum
Wild Chives	Threatened in NYS	Vascular Plant	Town & Fort Drum
Whippoorwill	Rare	Vertebrate Animal	Town & Fort Drum

Source: NYS DEC - Environmental Assessment Form (EAF) Mapper - 2023

Wildlife Species and Plants at Risk

LeRay is home to a many indigenous species, some listed as threatened, endangered, and/or rare according to NYS DEC. The majority of threatened or endangered species in LeRay thrive in fields, tall grasses, and wetlands. According to the Endangered Species Act, an endangered or threatened species is one with "…the present or threatened destruction, modification, or curtailment of the species' habitat or range; over utilization for commercial, recreational, scientific, or educational purposes; disease or predation; the inadequacy of existing regulatory mechanisms; and other natural or manmade factors affecting the species' continued existence."

Species at risk currently occupying Town and other area habitat, include, but are not limited to: **Northern Harrier** (Endangered or Threatened); **Black Tern** (NYS Threatened); **Pied-billed Grebe** (Threatened); **Sedge Wren** (Threatened); **Upland**

Sandpiper (Threatened in NYS); and **Wild Chives** (Threatened in NYS); and the Whippoorwill (rare). Other species that frequent areas within the Town include the **Short Eared Owl** (NYS Endangered; the **Indiana Bat** (Federal and NYS Endangered), and the **Northern long-eared bat** (Endangered). The location and presence of these species are described:

Northern Harriers **- (NYS Threatened)**
Northern Harriers are present in migration, as nesting residents and as winter residents. They occupy wetlands, shorelands, shrublands and fields.

Black Tern **– (NYS Endangered)**
Black Terns migrate back to the area in early May breeding on inland marsh complexes (such as Perch River Wildlife Management Area), ponds, mouths of rivers, and shores of large lakes.

Short Eared Owl – **(NYS Endangered)** Northern populations are believed to be highly migratory, and there is a marked increase in the number of birds in New York in the fall and spring. Short-eared Owls are more common as winter residents in New York State. As breeders they are very rare, being largely limited to the St. Lawrence and Lake Champlain Valleys, the Great Lakes plains and the marshes of Long Island's south shore. Probable locations have been noted in the approximate vicinity of LeRay according to NYS DEC.

Upland Sandpiper **(NYS Threatened)** In the northeastern United States populations are declining due to loss of grassland habitat. Historically the upland sandpiper was reported as a locally common breeder in parts of New York. Today the state population is restricted to remaining grassland habitats of the St. Lawrence Valley in Jefferson County, and the Mohawk Valley.

Blandings Turtle **(Endangered)** Jefferson and St. Lawrence counties (between US Route 11 and the St. Lawrence River; and Fort Drum) are among the few places in New York State home to threatened Blanding's turtles.

Indiana Bat - **(Federal and NYS Endangered)** Indiana Bats have established winter hibernacula and summer ranges within central Jefferson County.

Northern Long-eared Bat **– (Endangered)** Northern Long-eared Bats are known by NYS DEC to summer in the Town of LeRay/Fort Drum and winter in Brownville and Watertown.

Small-footed Bat **– (NYS Species of Special Concern)** Small footed Bats are all known to have hibernacula and maternity colonies in Jefferson County according to Integrated Environmental Data, LLC.

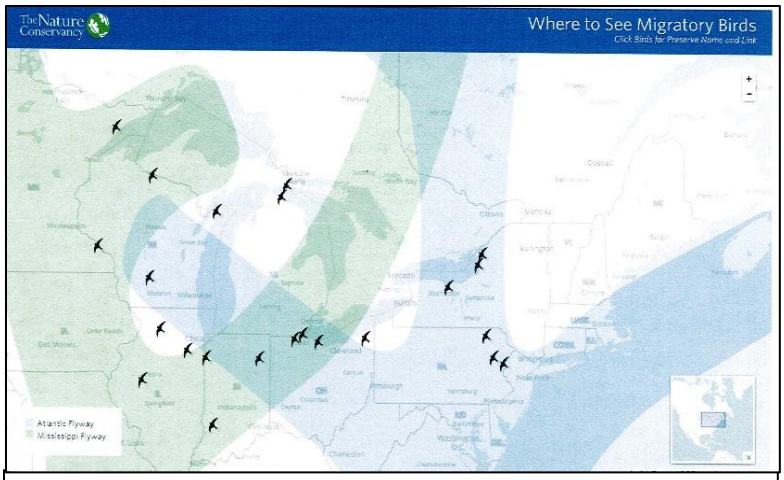
Perch River Wildlife Management Area

According to the New York State Dept. of Environmental Conservation the Perch River Wildlife Management Area (WMA) is a 7,862 acre parcel dominated by its high quality wetland and open water habitats, but also offers woodland, early succession, and grassland habitats. The area is well known for its waterfowl and furbearer game species. It is a site for waterfowl concentration, diverse species concentration, individual species concentration, species at risk, and bird research. The site supports American bittern (SC), least bittern (T), osprey (SC), bald eagle (T), 50-60 breeding pairs of black terns (E), sedge wren (T), and Henslow's sparrow (T). Many other characteristic wetland species breed here including pied-billed grebe (T), trumpeter swan, Virginia rail, sora, common moorhen, American coot, marsh wren, and swamp sparrow. Open water serves as foraging area for Caspian tern, common tern, black tern, pied-billed grebe, osprey, bald eagle, and many other species.

The Perch River Wildlife Management Area consists of high quality wetlands and open water bordered by deciduous forest, shrubland, and open agricultural fields. Exemplary ecological communities include: deep emergent marsh, shallow emergent marsh, shrub swamp, and forested wetlands.

Migration and Stopover Areas

Many areas in Jefferson County provide nesting, feeding and resting habitat for waterfowl. The Lake Ontario plain and escarpment, especially where they are located relatively close to the lake, St. Lawrence River Valley including Perch River WMA and other rivers such as the Black River, support important avian and bat migratory flyways, providing crucial resting and feeding areas during migratory periods, and critical airspace for migrating birds and bats. They also provide important and unique nesting and wintering habitats for critical avian species, including the American bald eagle, short-eared owl, northern harrier and other species of conservation concern.



Atlantic Flyway – Northeastern United States and Canada

Thus, the Great Lakes basin, especially the Lake Ontario coastal areas including the St. Lawrence River Valley, supports large populations of migrating birds during both spring and fall. Millions of waterfowl, shorebirds, water birds, songbirds, and raptors utilize the region's diverse habitats on their journeys, including open waters, agricultural fields, mudflats, shrub lands, marshes, coastal wetlands, grasslands, and forests. These migration rest stops, also known as "stopover areas", provide shelter and nourishment to hundreds of different bird species, helping to ensure the success of these migrations, which contribute to the region's biodiversity, and support the local economy through recreational opportunities such as bird watching.

These birds rely on local coastal areas. For many if not all of them, it's the unique combination of dependable winds created along the water/land boundary at the regional level, suitable rest stops, necessary reproductive conditions. Food sources such as aquatic insects, plants, and fish are available at many stopover areas, allowing the hundreds of migratory species to keep coming back and/or through the area annually.

Such areas include French Creek Wildlife Management Area (WMA), Perch River WMA, Point Peninsula WMA, Ashland Flats WMA, Chaumont Barrens, and the hundreds of other farm fields, wetlands, and grasslands that encompass the area.

Migration Times

Many species of birds migrate during the day. These diurnal migrants include shorebirds, various hawks, gulls, loons, ducks, geese, and songbirds. But the bulk of songbirds migrate at night. Nocturnal migrants such as warblers, vireos, thrushes, and sparrows leave their daytime habitats just after dusk and spend the next eight to ten hours flying. Near dawn they descend to another site along their migratory route, and spend the day or next few days feeding and resting until they can continue the journey. Each species employs its own strategy for migration, but all require two important things during this event – food and rest. LeRay's myriad of habitats provide both of these necessities.

Diurnal migration depends heavily on riding rising air currents called thermals. As these air currents heat up during the day and rise in the atmosphere, birds take advantage of this lift. Many species thermal hop – rising to the top of one thermal, setting their wings for direction, coasting to the next thermal, and then repeat the process. Thermals do not occur at night

in sufficient quantity to allow these birds to utilize them successfully. Other thermal riding or soaring birds include cranes and herons. Some songbird species, such as kingbirds, swallows, and blackbirds will migrate during the day however, the vast majority are nocturnal migrants.

Most birds (excluding owls, night-herons, goatsuckers, and some other species) are typically diurnal during most of the year, but they migrate only at night. Nocturnal migrants tend to be birds that have long distances to fly and do so in powered flight. At night the atmospheric structure is much more stable. It is cooler and smoother than during the day. The coolness helps birds to maintain healthy body temperatures without large water losses, while the smoothness of the air allows for a straight level course without expending energy correcting and maintaining a course in turbulent air. Also, the cover of night is a good way to avoid predation.

Wintering Areas

Migrating birds find their way between their wintering and breeding grounds. However, a number of birds winter within the area: for example, bald eagles winter along the St. Lawrence River. Their wintering area stretches from Kingston, Ontario and Cape Vincent, New York easterly through to Cornwall, Ontario and Massena, New York, depending upon ice cover. Typically, eagles can be seen at Wellesley Island State Park along the edge of the ice or roosting in trees along the shoreline. If ice forms over these areas, eagles have been known to move further east to the Brockville narrows or other open water.

Bats

Three species of bats (Indiana Bat (Federal and State Endangered), Northern Long-eared Bat (Endangered) and the Small-footed Bat (NYS Species of Special Concern) are active in the warm months throughout the area. During the winter several species, including the federally endangered Indiana bat, hibernate in caves in the region. Several cave wintering bat species populations have been decimated by the introduced "white nose syndrome". It is essential that any anthropogenic (caused by human action) disruptions of population recovery be prevented.

Monarch Butterflies

Monarch butterflies in Eastern North America have a second home in the Sierra Madre Mountains of Mexico where they overwinter from October to late March (USDA – Forest Service).

They migrate/travel during the day and need to roost at night. They gather close together during the cool autumn evenings and typically the same roost sites are used year after year. Often pine, fir and cedar trees are chosen for roosting as these trees have thick canopies that moderate the temperature and humidity at the roost site. As warm temperatures and longer days occur, the migratory generation of monarchs finishes the development they halted prior to their migration. This starts the northern journey back to North America. Unlike the generation before them, who made a one-generation journey south, successive generations make the journey north.

They use a combination of air currents and thermals to travel long distances. Some fly as far as 3,000 miles to reach their winter sites.

Because the migrating monarchs are concentrated in a few locations during the winter, they are especially vulnerable to harsh weather and to human activities that disrupt or destroy their habitat. This can reduce the number of monarchs that leave the overwintering sites in the spring. Similarly, migrating and breeding monarch

populations are vulnerable to harsh weather and to human activities that reduce milkweed and nectar sources. This can reduce the number of monarchs that reach overwintering sites.

Pollinator Importance

Many ecosystems need pollination to occur, and we rely on our pollinators to make it happen. This eye-opening quote attributed to Albert Einstein sums up why we need pollinators: "If the bee disappears from the surface of the earth, man would have no more than four years to live."

Pollinators all over the world are in decline, including our native bees and honey bees. Their decline is due to loss of habitat and food sources as well as increased use of pesticides and extreme weather patterns related to climate change.

Pollination is the process of transferring pollen from the male part of a flower (anther) to the female part (stigma). The transfer of pollen in and between flowers of the same species leads to fertilization and successful seed and fruit production for plants. Pollination ensures that a plant will produce full-bodied fruit and a full set of viable seeds.

When we hear the word pollinators, most of us think of bees and butterflies. However, they are not the only pollinators. Beetles, hummingbirds, birds, ants, moths, caterpillars, and even bats are pollinators. Bats and moths pollinate at night.

Entomologist Doug Tallamy's research concludes that without insect pollinators, 80% of all plants and 90% of all flowering plants would disappear; His message is clear: there will be no lions, tigers, or bears, birds, bats, or bunnies—or humans—in a world without insects.

Therefore, supporting our pollinators should be a priority. Here are some steps you can incorporate into your gardening practices:

Choose native plants

Native plants provide pollinators with an essential food source. Pollinators and their larvae are specialized eaters. Most only eat from specific plants and they have different needs throughout the year. The unavailability of certain plants can throw off the ecosystems that support pollinators.

Native plants are plants that occur naturally in a geographic area. They were not introduced, imported, or transplanted by humans. Native plants are acclimated to their geographic region's climate, soil, rainfall, the availability of pollinators, and seed dispersal. Native plants include shrubs, trees, grasses, annual and perennial flowers.

Many native plants are host plants where butterflies and moths lay their eggs. Most of us know that the monarch butterfly caterpillars eat milkweed; it is the monarch's host plant. Butterfly larvae, or caterpillars, feed on the host plants for their nutrition. Remember they are specialized eaters and many only eat specific native plants. Most non-native plants do not provide food for larval stages of pollinators.

Remove invasive plants from your landscape

Reduction of pollinator habitat is not only a result of urbanization—but it is also because of the introduction of invasive plants. Invasive species are plants that were brought from other regions or countries; they are not native to our area. These plants often have prolific reproduction, crowding out native plants. This, in turn, threatens and reduces pollinator habitat.

Some of the most common invasive plants here in upstate New York include the Common Buckthorn, Common Reed, Exotic Bush Honeysuckles, Garlic Mustard, Giant Hogweed, Japanese Barberry, Japanese Knotweed, Japanese Stiltgrass, Multiflora Rose, Oriental Bittersweet, Swallow-Worts, and the Tree of Heaven.

Don't serve poison to our pollinators

The use of pesticides and chemicals inadvertently kills beneficial insects like pollinators and may travel up the food chain to birds and small mammals. Chemicals and pesticides are sold to homeowners to promote and enhance lush lawns, to kill weeds and insects. The dandelion has become villain #1, and homeowners are encouraged to destroy them. However, despite the fact that it is not a native plant, dandelions are one of the few early-blooming spring pollen sources for bees.

By chemically treating your lawn, you are killing pollinator's eggs, larva, pupa, and adults. Many bees are solitary and nest in loose soil. There are times when chemicals or pesticides are the only option, but they should only be used as a last resort.

Leave the fall cleanup until the spring

Pollinators need nesting sites; keep some piles of leaves for the bumblebee queens or those woolly caterpillars who often overwinter in leaf litter. Wait until temperatures reach a consistent 50 degrees, before you remove the leaves.

Wildlife Corridors

Wildlife corridors consist of greenspace and manmade structures/improvements that allow wildlife to move between larger areas of existing habitat. While typically wildlife corridors are focused on a specific species to allow their movement within and across an area, in rural areas it can be focused simply on greenspace. The greenspace review should reveal general connectivity opportunities. Keeping in mind that a corridor does not have to be continuous but also can be small areas of viable habitat. For example, much of Fort Drum beyond the cantonment area consists of wildlife corridors. However, the communities surrounding Fort Drum should address wildlife corridors/greenspaces to maintain habitat off-post for wildlife needs.

The Merriam-Webster dictionary defines "wildlife" as living things and especially mammals, birds, and fishes that are neither human nor domesticated. "Corridor" has a broad definition that includes a usually narrow passageway or route: such as a land path used by migrating animals or an area or stretch of land identified by a specific common characteristic or purpose. When you look at "wildlife corridor" as a collective term you find definitions like a strip of natural habitat connecting populations of wildlife otherwise separated by cultivated land, roads, etc. or a narrow area of land that is a habitat (a suitable living environment) for wild animals and plants and that connects other habitats across an area where they cannot easily live.

The U.S. Fish and Wildlife Service explains wildlife corridors may span anywhere from a stretch of river to a whole continent. The World Atlas defines a wildlife corridor as an area of habitat that provides passage for wildlife across artificial obstacles such as dams, roads, and railways. It is also known as a habitat corridor or a green corridor. They go on to discuss categories of wildlife corridors which are classified according to corridor width, continuity, and whether they are overpasses or underpasses. Local corridors vary but can be less than 50 meters (164 feet) in width and join patches of gullies, wetlands, and ridgelines. In terms of continuity, wildlife corridors may either be continuous or stepping stone corridors. Continuous corridors are not broken up into various parts, while stepping stone corridors are small patches of suitable wildlife habitat. Overpasses or underpasses are manmade

and designed to facilitate safe passage primarily across roads and railways.

The Black River Valley lies between two of the largest forested areas in New York State: the 6 million acre Adirondack Park and the 1.2 million acre Tug Hill Plateau region. There is an initiative focused on maintaining wildlife corridor connections between the two predominant regions.

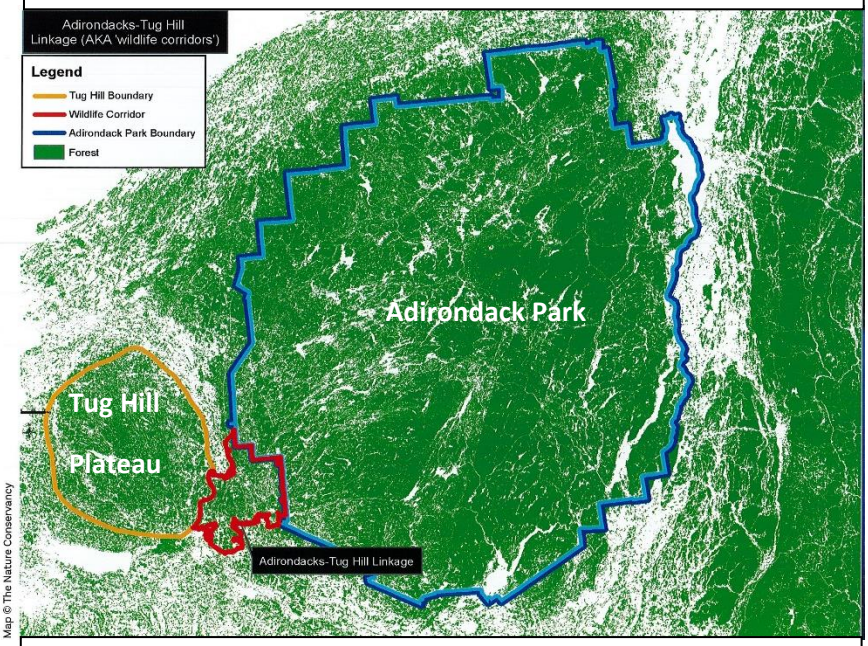
The Black River Valley currently consists of a series of communities, farms and forests with rural homes along the landscape. As development occurs, sustaining people who live and work there as well as maintaining wildlife corridor connectivity for animals that traverse the region and beyond should be major priorities.

As they travel, animals not only need access to core forests, but they also rely on small connections along the way for their day-to-day needs. Thus, connections at the community level are often made up of small wooded plots, hedgerows, wetlands, stream and river corridors that separate large, open fields.

Wildlife have four basic needs for survival: food, water, cover and space. Cover is necessary for nesting, escaping from predators, resting and seeking shelter from the elements. Animals also need space to find food and find mates, this space is called home range. Such space is larger for larger animals such as bears and smaller for small predators such as fishers. For example, black bears have a home range of up to 60 square miles, while fishers can require up to 10 square miles.

A connected landscape keeps wildlife from genetic isolation over time. For example, a population confined to one area because its movement is cut off by roads or other development risks inbreeding, which diminishes the genetic diversity of the population and its overall resilience. Thus a connected landscape also allows animals to shift ranges in response to changing habitat conditions. This movement can take time in terms of a generation, but it can be especially important as climate change occurs.

Adirondack Park/Tug Hill Plateau - Wildlife Corridor Linkage



Source: *Management Recommendations For Landowners*, by The Nature Conservancy's Adirondack Chapter and Tug Hill Tomorrow Land Trust.

Predominant Land

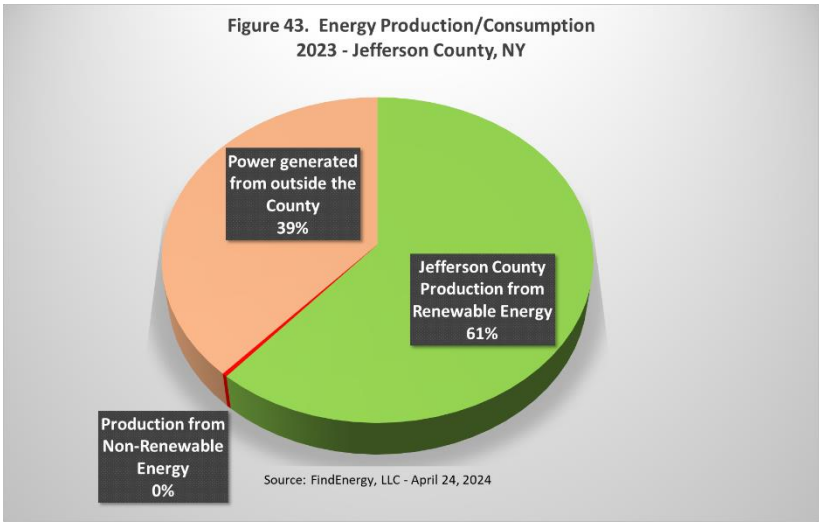
Chapter 10. Land Use includes a land cover map and character areas map which illustrate the predominant land cover and character areas throughout the Town. These maps allow one to gauge the amount of forested, open or farmed, developed, and creeks, streams and river type areas throughout LeRay.

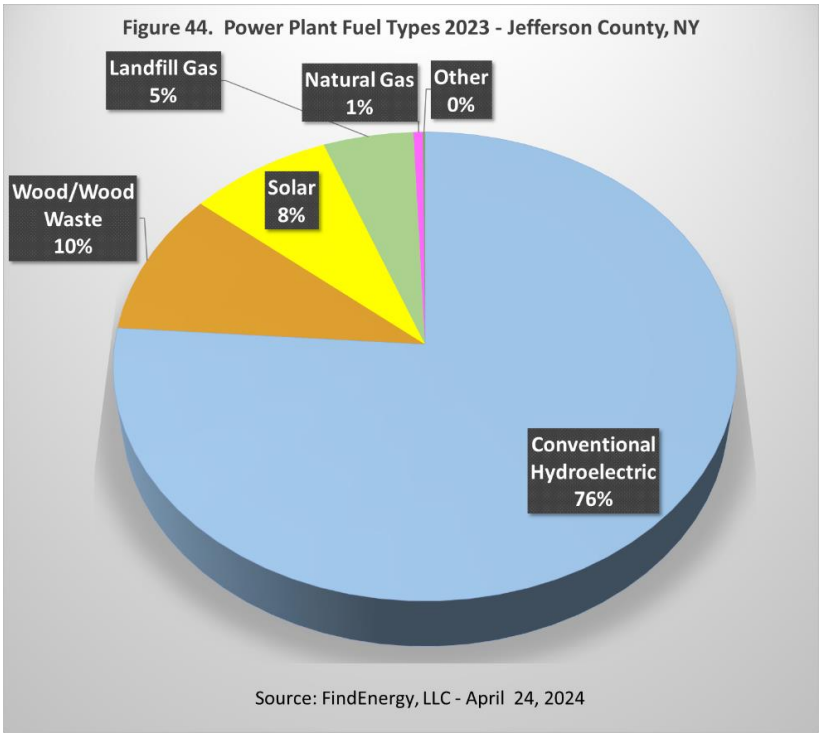
NATURAL RESOURCE PRIORITIES:

- ✓ Consider the potential impact and minimize the loss of endangered or threatened species habitat as new or redevelopment occurs.

- ✓ Consider pollinator needs within projects as grass or landscaping is added/maintained to site layouts.
- ✓ Consider potential wildlife corridor connectivity as development proposals go through the review process.
- ✓ Encourage best management practices and measures to maintain clean water, waterways and groundwater.

Contents





Introduction

As LeRay ponders its future, it must recognize one national and state policy that will increasingly affect Jefferson County is the push toward more renewable energy production. Importantly, hydroelectric power has been prominent in many areas of Jefferson County since its settlement and continues today but expanding renewable energy as a priority continues to shape New York State and the North Country.

Figure 43 indicates the percentage of renewable energy production in Jefferson County during 2023. Of note, 61% of the energy produced was considered renewable, 1% generated was considered non-renewable, while the other 39% was generated from outside the County.

Figure 44 indicates 76% of the energy generated within Jefferson County was conventional hydroelectric power within in 2023. Other renewable energy sources like solar which generated 8% of the energy generated, and landfill gas generating 5%. Wood/wood waste on Fort Drum was phased out during 2023 but was used in the first half of the year to generate 10% of the energy produced.

Wind generation facilities have gained in prevalence in the state, however not commercially in Jefferson County. Policy incentives have led to more solar projects and thus, additional energy production in 2023, increasing from 5.7% in 2022 to 8% by 2023.

The term "renewable energy" refers to power that is generated by using resources that are naturally renewed over time. Because renewable energy systems, while producing energy locally, can have neighborhood and community impacts, local governments need to review/tailor their land use planning tools to regulate renewable energy in a way that is reflective of community values and planning.

For example, maintaining access to agricultural land has been a longstanding National, State and County priority. However, renewable energy production with solar energy facilities impact and can remove soils from agricultural production, even priority agricultural soils for decades.

While renewable energy is an important component to becoming more sustainable, some types are less impactful than others. Commercial wind energy can pose a series of impacts and effects on immediate residential neighbors, communities as well as on both Watertown International Airport, Wheeler Sack operations and related Fort Drum training that takes place on the ground and in the airspace throughout the region. Similarly, large scale solar facilities also impact the community depending on the location, size and scope of project. In certain locations and with buffering and screening, solar facilities can decrease their visual impact on neighbors. Glint and glare impacts can occur according to the Federal Aviation Administration. Fort Drum and airport compatibility continues to be priorities for the Town as outlined in Chapter VI and to the County.

As mentioned, the footprint of each solar energy facility occupies land for 20 to 25 years depending on panel life expectancy. Therefore, the Town recognizes solar facilities' potential impact on prime agricultural soils and soils of statewide importance should be limited where possible to maintain farmland for current and future food production. Requiring pollinator friendly plants and limited mowing schedules can be a positive trade-off to offset the loss of priority agricultural soils from production.

Another challenge that solar and wind renewable energy projects face is the timing of when they generate power. This may not always be during peak demand. This factor implies a potential need for battery storage facilities of small scale initially, and larger scale as our dependence and use of renewable energy expands. Thus, the placement of battery storage facilities may become another factor in renewable energy expansion.

Recent Local Energy Projects

Recent National, State and local incentives for renewable energy production have resulted in many solar projects proposed, reviewed and constructed in Jefferson County. Specifically, many small scale, community solar and commercial large scale

solar projects have been brought online throughout the County.

Also, several wind projects have been proposed in the region. Completed in the summer of 2009, the Wolfe Island wind facility, in Ontario, Canada included 86 turbines. Two wind projects were proposed in Cape Vincent; an initial version of Horse Creek was proposed in Clayton previously with some turbines proposed in Orleans; and a wind project on Galloo Island in Hounsfield was proposed. However, no commercial wind turbines have been constructed within Jefferson County at this time (spring 2023).

While grid capacity, project economics, community impacts, and local zoning regulations affect project feasibility and construction, the solar and wind resources present in some areas in Jefferson County provide an environment that could result in additional renewable energy as well as battery energy storage projects. The community and regional cumulative impacts of such potential projects eventually operating within the area should be considered. Any solar, wind, geothermal, or other local energy proposals should be viewed in the context of their economic impact, visual effect on the scenic quality and character of the community, the safety of residents, as well as their potential noise and other environmental impacts on humans and wildlife. In addition, their potential impact on Fort Drum's ongoing training mission and rapid deployment capabilities must be considered. Similarly, their potential impacts on the Watertown International Airport should also be avoided to maintain airport compatibility well into the future.

Potential Need for Regulation

As the need for renewable energy projects and the power they generate increases, the Town should consider refining its regulations to encourage them to be sited in compatible areas with buffering to limit visual impact, thereby minimizing impacts within priority areas, concentrated residential areas, sensitive wildlife habitat areas and strategically important facilities. Furthermore, the potential visual, noise, and other impacts such projects could have on residential areas, the communities and employers such as Fort Drum should be addressed as part of the setback determination, buffering and review process. Land Use compatibility continues to be a priority for the Town of LeRay.

Recent State Priority Toward Renewable Energy and Electricity

Renewable energy development is expected to continue to expand. New York State solidified this once the most recent priority to decrease and eventually eliminate fossil fuel dependency for energy production by 2040. Along with the limitation on the sale of new gas-powered vehicles by 2035. So the move toward eliminating fossil fuel use in vehicles and natural gas heating, cooking, etc. may also increase electrical demand to make up for this transition to electric use throughout the home and business environments.

With recent technological and regulatory trends related to solar facilities wind facilities, battery storage is expected to continue to develop and expand in necessity as system components as well as grid capacity limits are met in some areas.

Recent engineering trends affecting commercial wind turbines have resulted in taller towers and longer blades that harness more wind energy per turbine. Being higher allows them to harness more wind energy. They are also more efficient, and therefore, can produce more power per turbine, which can lead to fewer numbers of turbines per project than were possible with shorter ones that produce less power per turbine.

However, the visual impact, noise, and potential wildlife impacts could be greater because of their larger size. According to the Audubon Society and the American Bird Conservancy, taller towers with larger blades will result in more bird kills. The US Fish and Wildlife Service used radar to estimate the height of birds and bats migrating, dense numbers of which migrate at night between 300 and 500 feet above the ground – putting them in direct contact with larger wind turbines.

The larger wind turbines may also present a higher likelihood of conflicting with local airport approach, takeoff and flight surfaces, as well as potentially additional radar conflicts with the Fort Drum air traffic control systems as well as the weather radar system in the region.

Renewable Energy Regulations

As renewable energy sources offer options for local energy production and evolve with technological changes, local requirements for such alternative energy projects should be updated. The following considerations should be used when reviewing alternative energy projects and\or updating the zoning regulation review criteria used to set standards for their review. Alternative energy systems may have an impact on adjacent properties, neighborhood, community, environment, which can include wildlife, therefore municipalities should review their land use regulations to facilitate opportunities for promoting or regulating renewable energy in a way that reflects community values and planning. These considerations are designed to help shape a dialogue if alternative energy regulations are contemplated by the Town.

Such solar and wind turbine requirements should address potential impacts to protect the community, its long-term quality of life, economic value, and property values. Therefore, adequate standards should be put in place to protect the community from any future requests in or near the Town.

Sustainability

Sustainability defined: Development that meets the needs of the present without compromising the ability of future generations to meet their own needs. The State's current pursuit of sustainability initiated with its goal of eliminating the use of fossil fuels by increasing the generation and use of renewable energy. The Town can pursue this concept of sustainability in many ways like reducing the community's dependence on the automobile as well as embracing housing and transportation affordability:

1) Strengthen commercial and community centers, supported by transit.
2) Create complete communities.
3) Reduce transportation fossil fuel consumption.
4) Improve regional infrastructure.
5) Reduce energy dependency and strengthen the economy.
6) Expand renewable energy generation.
7) Improve resilience of the energy delivery system.
8) Reduce the volume of solid waste.
9) Increase farming and forestry activities and viability.
10) Advance farming and forestry training.
11) Increase residents access to local food.
12) Reduce water consumption.

13) Protect habitats and water quality.
14) Increasing sustainability should involve adding EV charging infrastructure to commercial, residential and community service areas.

As an example, a way to strengthen villages, hamlets, and commercial/residential centers, can be to expand transit to serve these areas to reduce the dependence on vehicles. Mixed use zoning districts reinforce this pattern. Jefferson County is pursuing public transit which would increase affordability, reducing the need for each household to have an automobile or even multiple automobiles. Coordinating these efforts can lead to more sustainable communities in the Town of LeRay and Jefferson County.

Complete Communities

Complete communities is an urban and rural planning concept that aims to meet the basic needs of all residents in a community, regardless of income, culture, or political ideologies through integrated land use planning, transportation planning, and community design. This underscores the importance of affordable housing, a range of housing types and businesses, along with pedestrian walkability, public transit, access to schools, open space and parks, and medical services.

Complete communities consist of:

- ✓ Some compact, mixed-use developments that include residential, employment and/or commerce as well as services when possible.
- ✓ Include a portion of affordable housing.
- ✓ Connectivity between and among development sites.
- ✓ Connected street networks.
- ✓ Reduced area devoted to parking.
- ✓ Encourage green infrastructure to include permeable pavement, bioswales, etc. to utilize and reduce stormwater.
- ✓ Use site design for passive heating and cooling, as well as geothermal solutions.

State Initiatives with Local Impacts

With the New York State Clean Energy Standard to have 70% of energy generation to be renewable by 2030, and then 100% to be renewable by 2035, these state priorities will have land use implications for Upstate New York. Not only from the energy facilities themselves, but significant battery energy storage may also be needed to supply power when renewable sources aren't generating enough power.

Similarly, energy demand will increase to supply the power for additional electric vehicles once the state enacts the limitation on buying nonelectric cars after 2035. This increase in number of electric vehicles will require charging infrastructure to increase significantly to support their widespread use of EVs. Additionally, the State initiative to convert to electric heating and cooking in homes will increase electric demand while that conversion occurs. Geothermal use may help with this conversion.

In order for the Town to adjust to these state priorities and fulfill this increased energy demand locally, its renewable energy regulations and electric vehicle related infrastructure must respond by incorporating suitable requirements. While the Town has solar energy, battery energy storage regulations and wind regulations, it may need to refine Town priorities regarding a significant increase in renewable energy projects and any appreciable increase in battery energy storage facilities. The primary reason for this is that cumulative impacts of these facilities may not have been anticipated during the local law development or previous amendments.

Contrasted with the current state priority for 70%, and later, 100% renewable energy production, the initial energy projects started as

small residential solar and small commercial projects lead to the initial regulations. As the project sizes increased and impacts became evident the Town amended it regulations accordingly.

As the Town faces this challenge of additional renewable energy projects it must again refine its priorities. A common factor in the challenge to increase renewable energy production is the challenge to preserve farmland, especially priority soils and soils of statewide importance.

EV Charging Infrastructure Need

The other major challenge is to provide charging infrastructure for this expected increase in electric vehicles to enable businesses to thrive, employers to continue to succeed as people transition to driving electric cars as opposed to gasoline and diesel fuels.

Individual home charging will certainly fill a level of need for overnight charging for example, but the traveling public will also require charging stations, especially as electric vehicle use increases. This need will increase as people drive further from home and work.

Current electric vehicle drivers, as they travel long distances, plan their routes around charging stations. This will become more important over time as the number of electric vehicles on the road increases. For example, charging an EV battery takes an average of 20-30 minutes or more (and is known as dwell time). When customers spend more time in stores, they may buy more, resulting in higher revenue for retailers. As local businesses move to add charging stations this will expand their access to electric vehicle users and become a competitive advantage against those who don't have charging stations.

Renewable Energy – Zoning Criteria

Zoning for renewable energy to include battery storage should address the following review criteria or standards:

1. Emergency Response Plan;
2. Decommissioning Plan;
3. Visual Impact Assessment to include buffering and screening to minimize impact on views from the public roadways and neighbors as feasible;
4. Setbacks to limit project visibility as well as component visibility;
5. Visual Impact Criteria to limit aesthetic impacts;
6. Sound standards to limit noise impacts on neighboring receptors;
7. Airport and Military Base Compatibility: tall structure standards to limit impacts on civilian and military approaches, takeoffs, flight maneuvers and training activities. This would include deployment efficiency, object radar tracking (air traffic control) and weather radar effectiveness.
8. Glare and Lighting – Glint and Glare Hazard Analysis review to address potential pilot impacts and air traffic control tower impacts;
9. Wildlife Friendly Design;
10. Consider minimum separation distances between battery structures or other mechanisms such as fire-proof or heat resistance walls to limit any potential combustion (fire) from spreading to nearby batteries or structures.

Contents

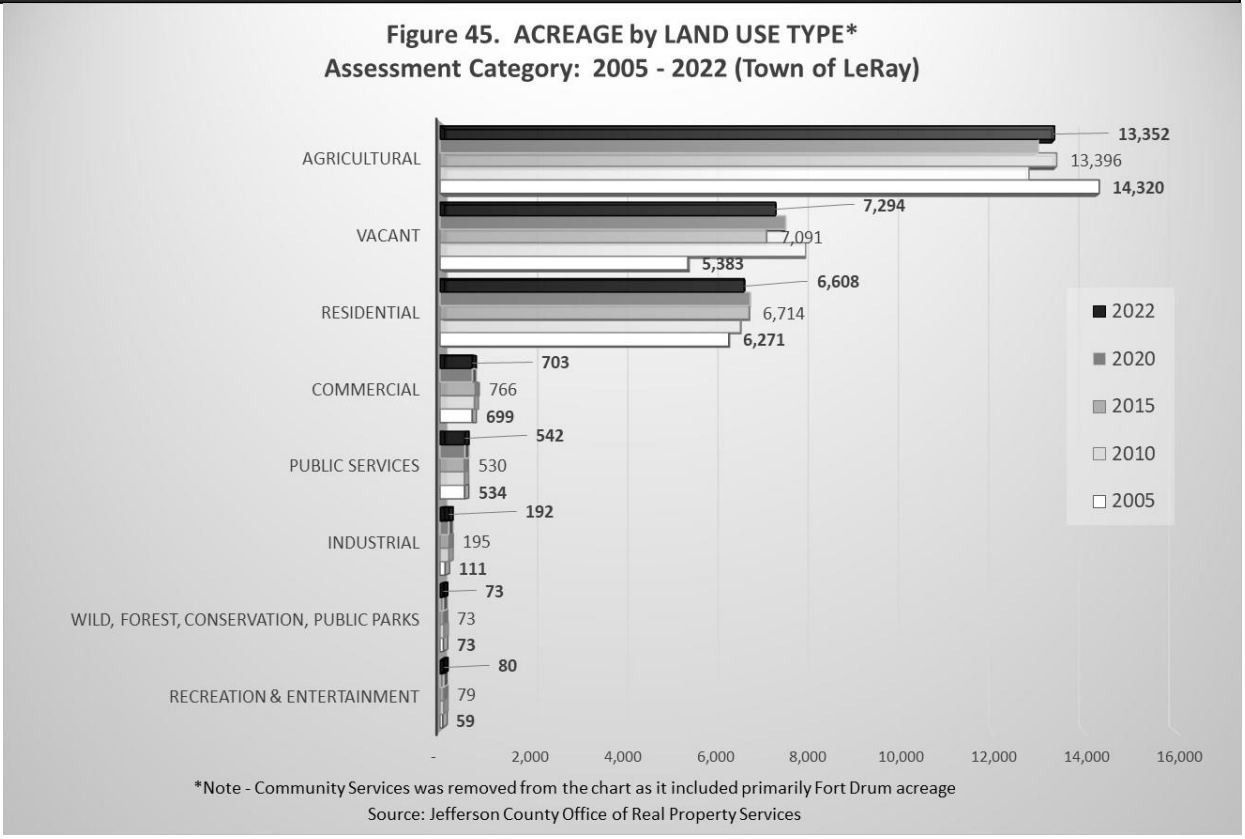
Land Use/Character Introduction

Much of the historical use pattern throughout the Town reflects its roots with rural farming centered around villages and hamlets, along with a few industries within the communities with the river and streams providing hydropower.

Since those early days farms have continued in many areas, the industries in villages no longer exist, while for the past 40 years, Fort Drum's strong influence is now reflected in the land use patterns. Its establishment and later expansion reinforcing and increased suburban residential but led to additional commercial growth outside in/near villages and hamlets. Much of this commercial growth took hold just outside Fort Drum's main gate along US Route 11 between NYS Route 342 and the North Gate, where it flourishes today.

Parts of LeRay also expanded with additional bedroom community residential developing close to Fort Drum and the City of Watertown. This suburban sprawl occurred along NYS Route 3 with the Black River as the backdrop, US Route 11, and NYS Route 232 in several areas. These residential neighborhoods strengthened and grew from within during Fort Drum's installment of the 10th Mountain Division and solidified during times of added troop and civilian employment levels. Today, many of these areas still have strong residential character and appeal. Several rural areas throughout the Town also have agricultural activities going on but some fields are converting to solar energy

Table 12. Land Use Type Assessment Category by Acreage - Town of LeRay	2005	2010	2015	2020	2022	% of 2022	Change 2005-2022
Recreation & Entertainment	59	79	79	80	80	0.3%	35%
Wild, Forest, Conservation, Public Parks	73	83	73	73	73	0.3%	0%
Industrial	111	193	195	192	192	0.7%	73%
Public Services	534	532	530	542	542	1.9%	2%
Commercial	699	748	766	705	703	2.4%	1%
Residential	6,271	6,526	6,714	6,737	6,608	22.9%	5%
Vacant	5,383	7,945	7,091	7,510	7,294	25.3%	36%
Agricultural	14,320	12,793	13,396	12,998	13,352	46.3%	-7%



facilities as grid capacity can accommodate. However, it is the dominance of agricultural land and natural features combined that the residents of the Town cherish.

Town Land Use by Assessment (Acreage)

The following sections provide a discussion of LeRay's land uses based on assessment category information from the Jefferson County Office of Real Property. Looking at the patterns from 2005 to 2022 in the Land Use by Assessment table below, several trends are evident during the time period. The largest percent increase in acreage was in industrial land rising by 73%. Second largest increase was in vacant land, rising by 36%, and a close third was the recreation & entertainment land use type, rising by 35%. Of note, was the 1% increase in commercial acreage during the time period.

The only decrease in land use was in the agricultural acreage, dropping by 7%. However,

Table 13. Land Use by Assessment Category - Number of Parcels Town of LeRay	2005	**2010**	**2015**	**2020**	**2022**	% of 2022	Change 2005-2022
Wild, Forest, Conservation, Public Parks	**1**	**2**	**1**	**1**	**1**	0.0%	0%
Recreation & Entertainment	**3**	**4**	**4**	**4**	**4**	0.2%	33%
Industrial	**9**	**10**	**10**	**10**	**10**	0.5%	11%
Public Services	**28**	**31**	**31**	**31**	**31**	1.5%	11%
Commercial	**74**	**83**	**101**	**100**	**103**	5.1%	39%
Agricultural	**128**	**118**	**134**	**142**	**130**	6.5%	2%
Vacant	**363**	**437**	**458**	**455**	**467**	23.3%	29%
Residential	**977**	**1,126**	**1,200**	**1,246**	**1,260**	62.8%	29%
*Note - Community Services was removed as it included primarily Fort Drum acreage							

agricultural land still comprises the largest segment of land area with 46.2% of the acreage for a total of 13,352 acres in the Town.

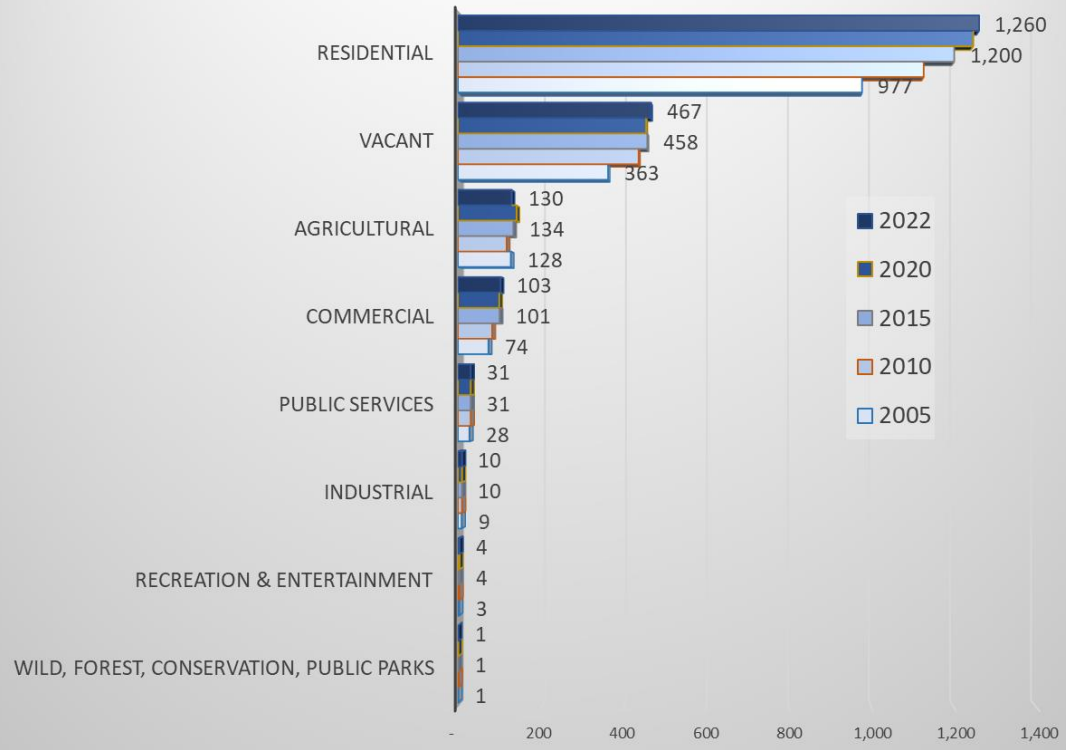
Land Use by Number of Parcels

The Town's Land Use are shown in Land Use Table by the number of parcels. The top three predominant land uses by acre are agriculture land, vacant land and residential land. Their number of parcels also changed in makeup from 2005 to 2022. The number of residentially assessed parcels increased by 29% from 2005 to 2022 comprising 62% of the parcels in the Town. Vacant parcels also increased by 29%, but they only comprise 23% of the parcels Townwide. Of note, the commercial number of parcels increased by 39% during the period, now making up 5.1% of the parcels.

The number of parcels illustrates several trends. Residential parcels have increased each year from 2005 to 2022. Most years the number of commercial parcels increased, and vacant parcels have increased as well.

Agricultural parcels have increased and decreased slightly so they would be considered steady.

Figure 46. NUMBER OF PARCELS by LAND USE TYPE* Assessment Category: 2005 to 2022 (Town of LeRay)



*Note - Community Services was removed from the chart as it included primarily Fort Drum acreage

Source: Jefferson County Office of Real Property Services

Predominant Land Uses

The top three major categories of land use will now be discussed below in terms of their individual land use trends: Agricultural; Vacant; and Residential.

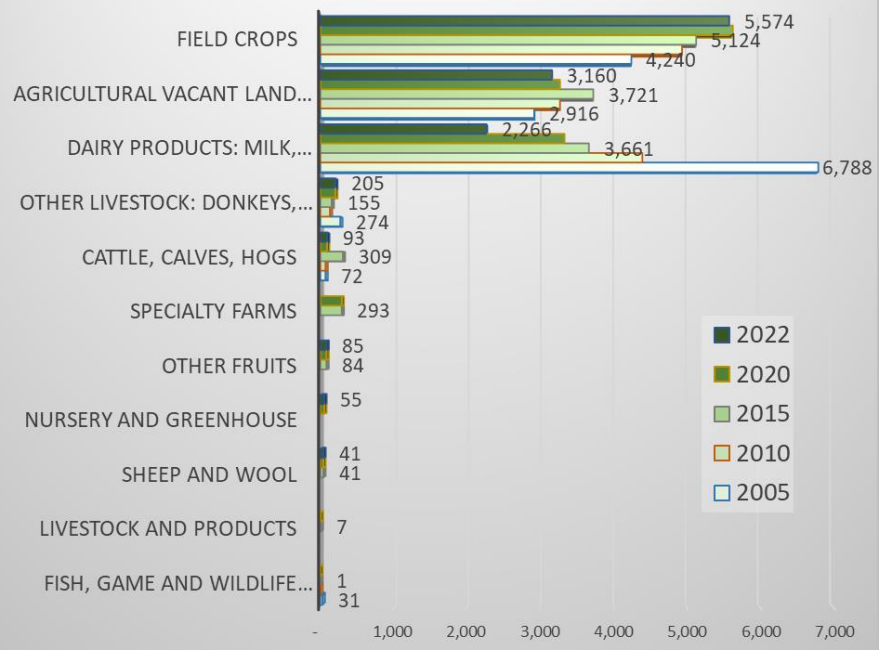
Agricultural/Farmland

As of 2022, agricultural land comprised 46% of the Town of LeRay acreage with 13,352 acres. This was the largest segment in the Town in terms of assessed land use.

The following page displays the Agricultural land use acreage trends in terms of the various assessment categories: field crops; productive agricultural vacant land; dairy products; other livestock; cattle, calves and hogs; specialty farms; other fruits; nursery and greenhouse; sheep and wool; livestock and products; and fish, game and wildlife preserves.

Most evident during the period is the decline in dairy products: milk, butter and cheese which lost 67% of its acreage in 2005, to make up 20% of the total by 2022. Meanwhile, field crops increased by 31% now comprising 49%, and agricultural productive vacant land increased by 8% to be 27% of the total acreage of agricultural land use.

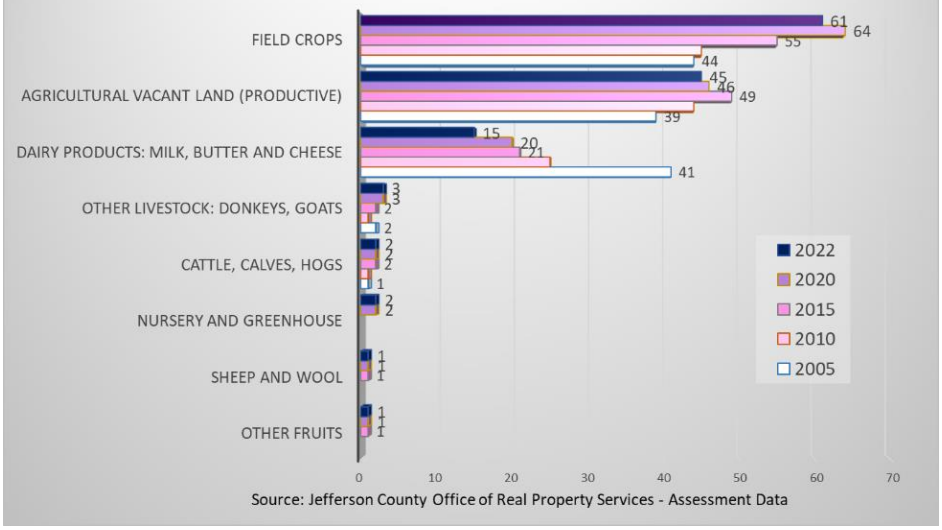
Figure 47. AGRICULTURAL ACREAGE by Land Use: Town of LeRay 2005 - 2022



Source: Jefferson County Office of Real Property Services - Assessment Data

It is assumed that some of the larger parcels may have been converted to other categories as the number of agricultural parcels didn't change very much beyond the sharp loss of dairy product parcels over the period.

Figure 48. NUMBER OF AGRICULTURAL Parcels by Land Use Assessment: Town of LeRay, 2005 - 2022

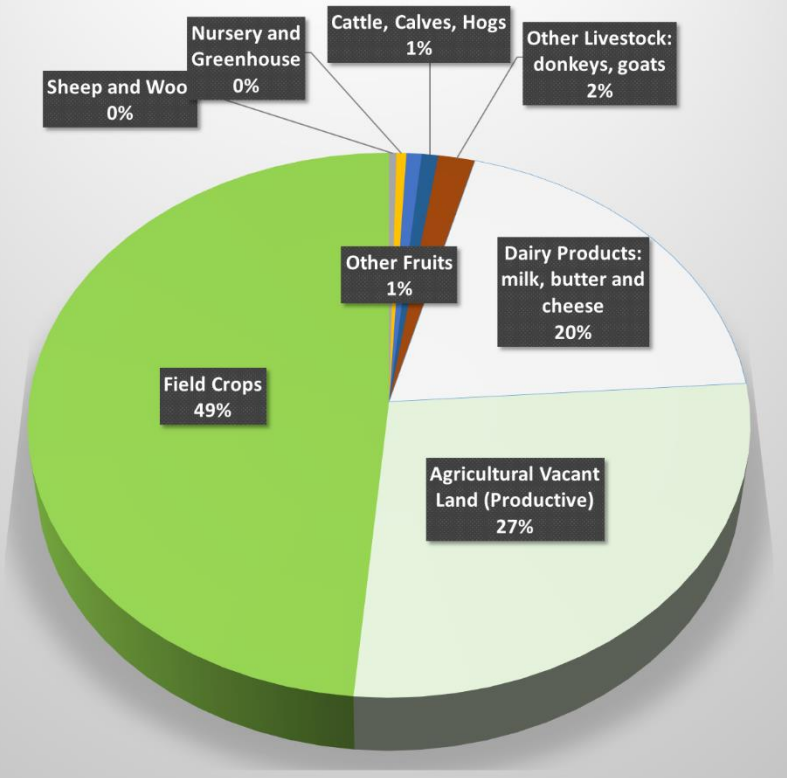


Source: Jefferson County Office of Real Property Services - Assessment Data

Overall Agricultural Acreage

Examining the pattern of agricultural assessment acreage, the pie chart indicates that field crops have grown to comprise nearly half (49%) of the acreage. This expansion occurred while the dairy products acreage declined the most as indicated above, but still to be 20% of the acreage remained for the milk, butter and cheese production in 2022. Also of note, was the increase in agricultural vacant land that is productive now being 27% of the total agriculturally assessed acreage.

Figure 49. AGRICULTURAL ACREAGE BY LAND USE ASSESSMENT CATEGORY - LeRay 2022



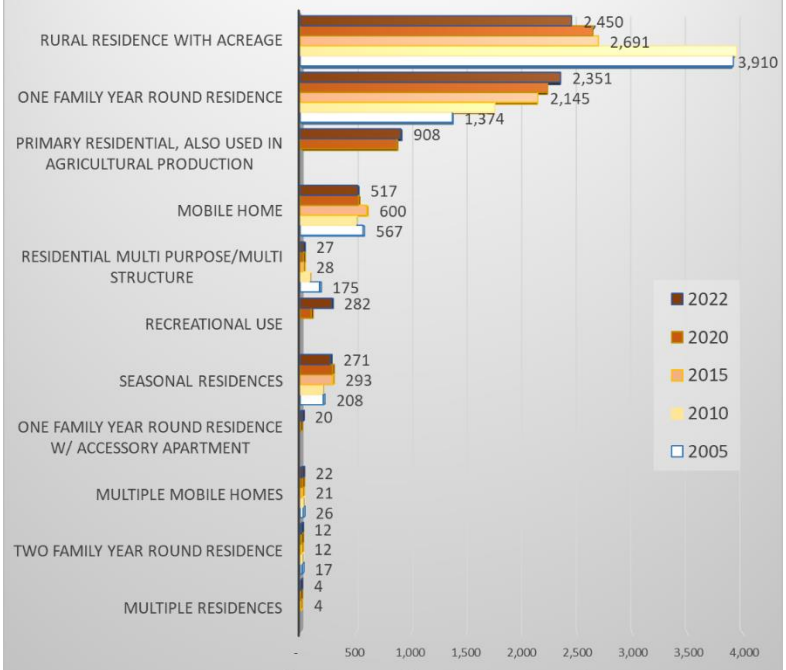
Source: Jefferson County Office of Real Property Services - Assessment Data

Residential Land Use

Residential land has also changed over time, as one family year round residence's by acreage increased from 1,374 acres in 2005 to 2,351 acres in 2022 (an increase of 71%). Rural residence's with acreage declined from 3,910 acres in 2005 to 2,450 acres by 2022 (a loss of 32%). Seasonal residence acreage increased from 208 acres in 2005 to 271 by 2022 (an increase of 31%). The other categories experienced change, but not very much considering the other three. Also, assessment categories changed somewhat over the years, so some categories are not comparable through the entire time period.

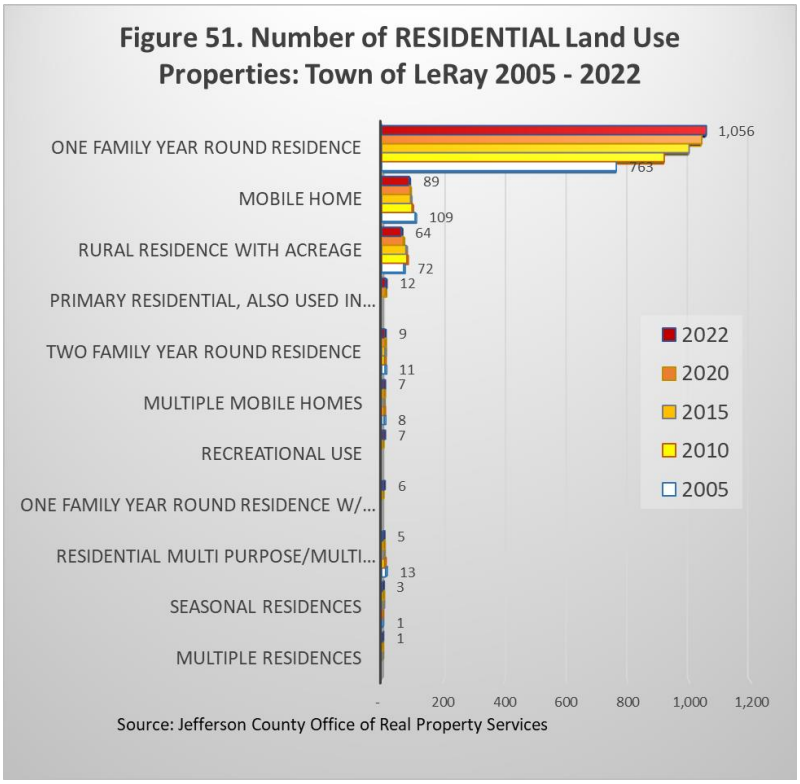
The number of residential parcels mirrored those changes, with one family year-round parcels increasing from 763 in 2005 to 1,056

Figure 50. RESIDENTIAL Land Use Acreage - by Assessment: Town of LeRay 2005 - 2022



Source: Jefferson County Office of Real Property Services

by 2022, (an increase of 38%). The number of rural residence with acreage parcels declined from 72 to 64 (a loss of 11%). Mobile home parcels declined from 109 to 89, a loss of 18% from 2005 to 2022.

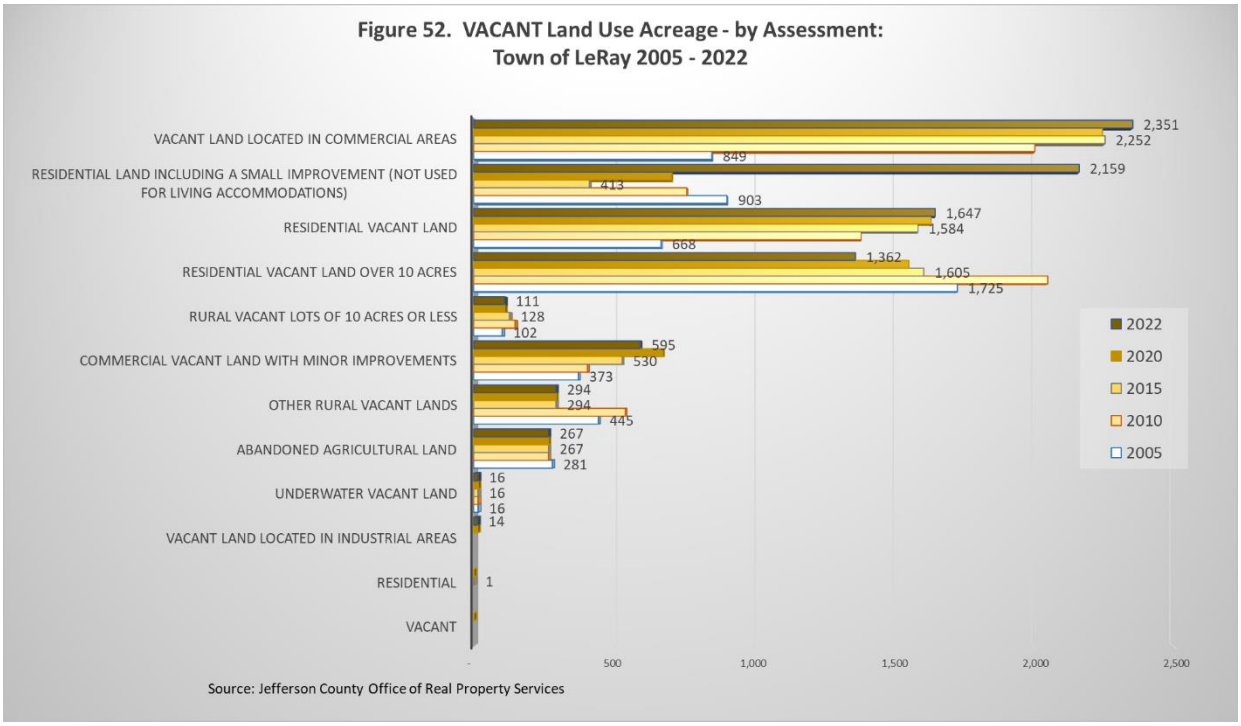


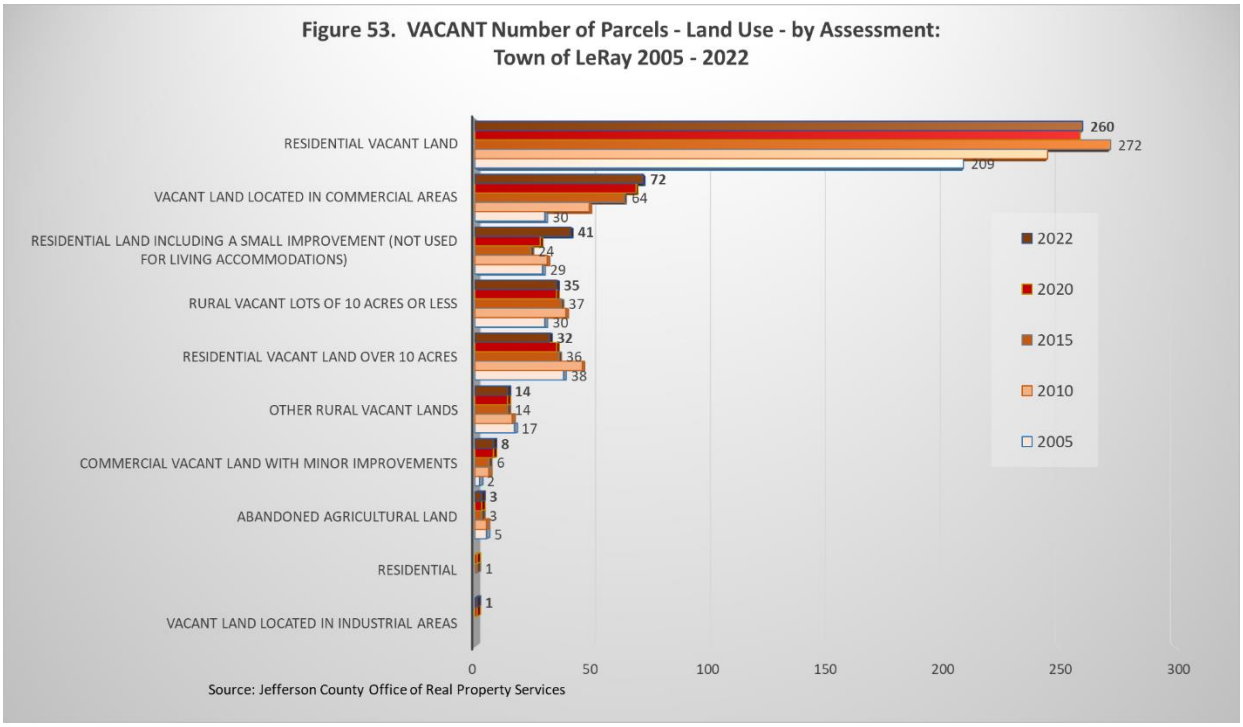
Vacant

Vacant land located in commercial areas acreage increased from 849 acres to 2,351 acres from 2005 to 2022 (an increase of 177%).

Residential land with a small improvement also increased from 903 acres in 2005 to 2,159 acres by 2022 (an increase of 139%).

Residential vacant land by acreage also increased significantly, going from 668 acres in 2005 to 1,647 acres in 2022 (an increase of 146%). Commercial land with minor improvements also increased, from 373 acres in 2005 to 595 acres in 2022 (a 59% rise). Some of the trends in vacant land could be due to assessment priorities with the community as well, not necessarily a change in land use per se. Residential vacant land over 10 acres decreased from 1,725 acres in 2005 to 1362 acres in 2022 (a decline of 21%).





Several categories of the number of vacantly assessed parcels by land use increased from 2005 to 2022. The number of vacant land parcels located in commercial areas increased by 140% going from 30 parcels in 2005 to 72 parcels in 2022. The most numerous, residential vacant land parcels also increased but by a smaller amount of 24%, going from 209 in 2005 to 260 by 2022.

The Land Use by Assessment Map on the upcoming page illustrate the location of assessed parcels by the broad categories of land use with specific residential uses for 2022. For the purposes of mapping land use, multi-family parcels were categorized as just that. Therefore, they display as multi-family on the map as opposed to the commercial category that is reflected in the land use tables and bar charts.

1) **Agricultural** - Property used for the production of crops or livestock.

   Agricultural vacant land: Land used as part of an operating farm. It does not have living accommodations and cannot be specifically related to any of the other uses under agricultural. Usually found when an operating farm is made up of a number of contiguous parcels.

2) **Residential** - Property used for human habitation. Living accommodations such as hotels, motels, and apartments are in the Commercial category.
3) **Vacant Land** - Property that is not in use, is in temporary use, or lacks permanent improvement.
4) **Commercial** - Property used for the sale of goods and/or services.
5) **Recreation & Entertainment** - Property used by groups for recreation, amusement, or entertainment.
6) **Industrial** - Property used for the production and fabrication of durable and nondurable man-made goods.
7) **Community Services** - Property used for the well being of the community.
8) **Public Services** - Property used to provide services to the general public.
9) **Wild, Forested, Conservation Lands & Public Parks** - Reforested lands, preserves, and private hunting and fishing clubs.

Source: NYS Office of Real Property Services

Specific Types of Residential:

One Family Year-Round Residence - A one family dwelling constructed for year-round occupancy (adequate insulation, heating, etc.).

Seasonal Residences - Dwelling units generally used for seasonal occupancy; not constructed for year-round occupancy (inadequate insulation, heating, etc.). If the value of the land and timber exceeds the value of the seasonal dwelling, the property should be listed as forest land.

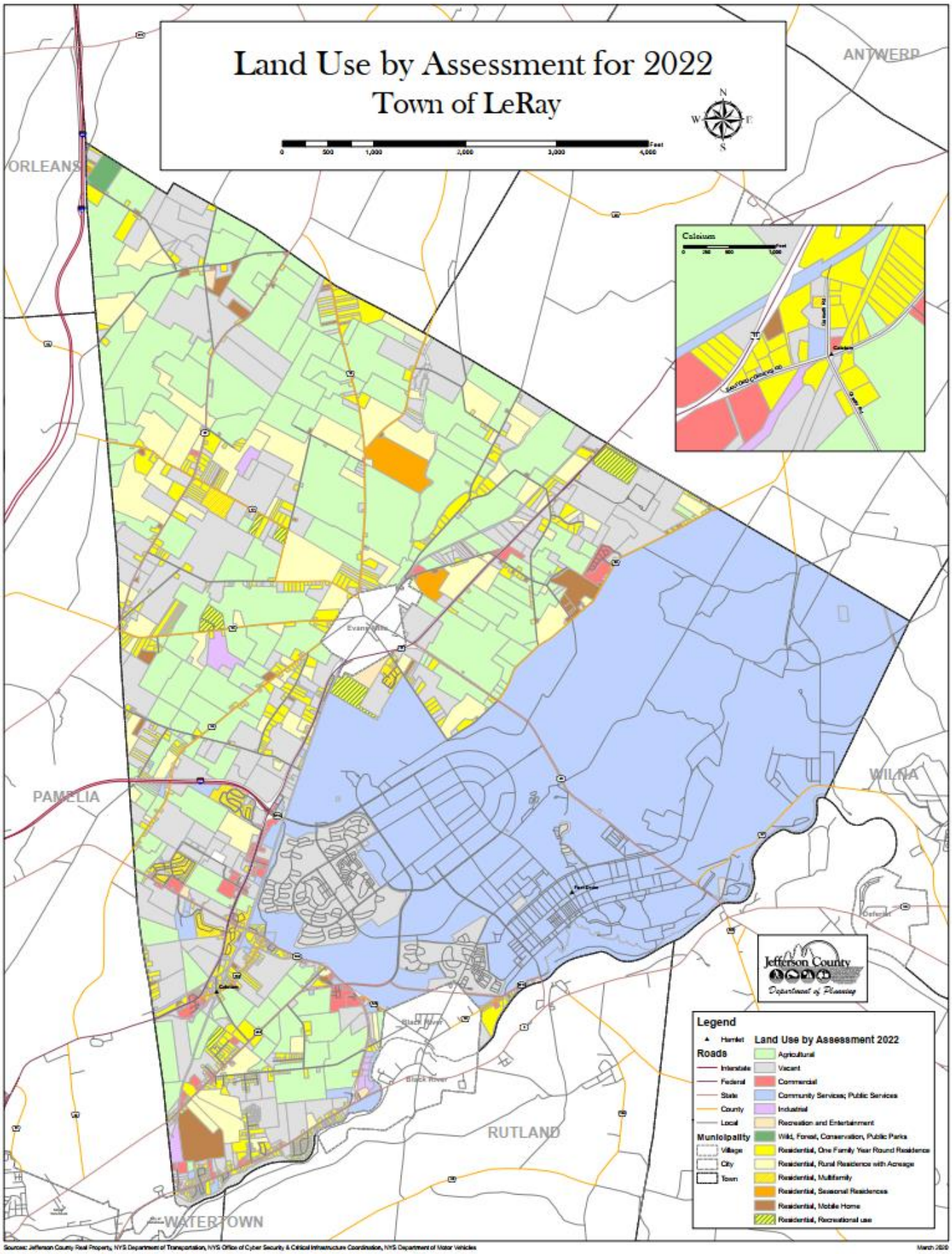
Rural Residence with Acreage – A year-round residence with 10 or more acres of land; it may have up to three year-round dwelling units.

Mobile Home - A portable structure built on a chassis and used as a permanent dwelling unit.

Multiple Residences - More than one residential dwelling on one parcel of land. May be a mixture of types, or all one type.

Commercial (residential income generating):

Apartment – Generally, when four or more units generate income or a profit they are considered to be apartments in the commercial assessment category.


Land Use by Assessment for 2022
Town of LeRay
ANTWERP
ORLEANS
PAMELIA
WILNA
RUTLAND
WATERTOWN
Calcium
Jefferson County
Department of Planning
Legend
Hamlet
Roads
Interstate
Federal
State
County
Local
Municipality
Village
City
Town
Land Use by Assessment 2022
Agricultural
Vacant
Commercial
Community Services; Public Services
Industrial
Recreation and Entertainment
Wild, Forest, Conservation, Public Parks
Residential, One Family Year Round Residence
Residential, Rural Residence with Acreage
Residential, Multifamily
Residential, Seasonal Residences
Residential, Mobile Home
Residential, Recreational use

based on aerial photography and predominant land use is described below.

Land Cover Types

Land Cover was mapped based on 2020 aerial photography town-wide at a scale of 1:2,500. Categories used were: Developed, Farmland, Forest/scrub, and Recreation according to the US Geological Survey – Land Cover Institute. Fort Drum was mapped as its own land cover category for simplification.

Fort Drum - Within the Town of LeRay, Fort Drum includes the cantonment area (housing, offices, various buildings, etc., Wheeler Sack Army Airfield, and some of the smaller training ranges as well. It comprises 38% of the Town in terms of acreage.

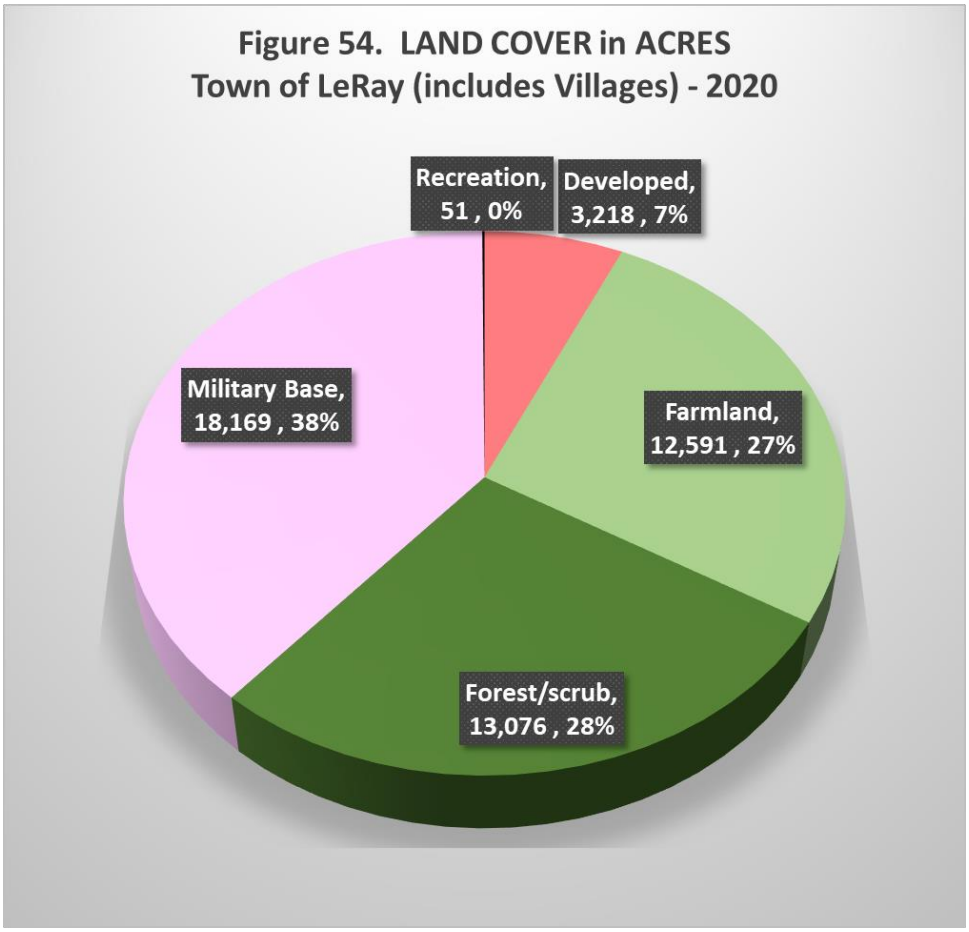
Forest/scrub – The Forest/scrub category comprised 28% of the Town in terms of acreage. These included areas characterized by tree cover and natural or semi natural woody vegetation. Trees included evergreen, deciduous, and mixed growth types, as well as shrub and overgrown areas. It also includes former farm fields now overgrown and in the early successional stages of brush and tree formation.

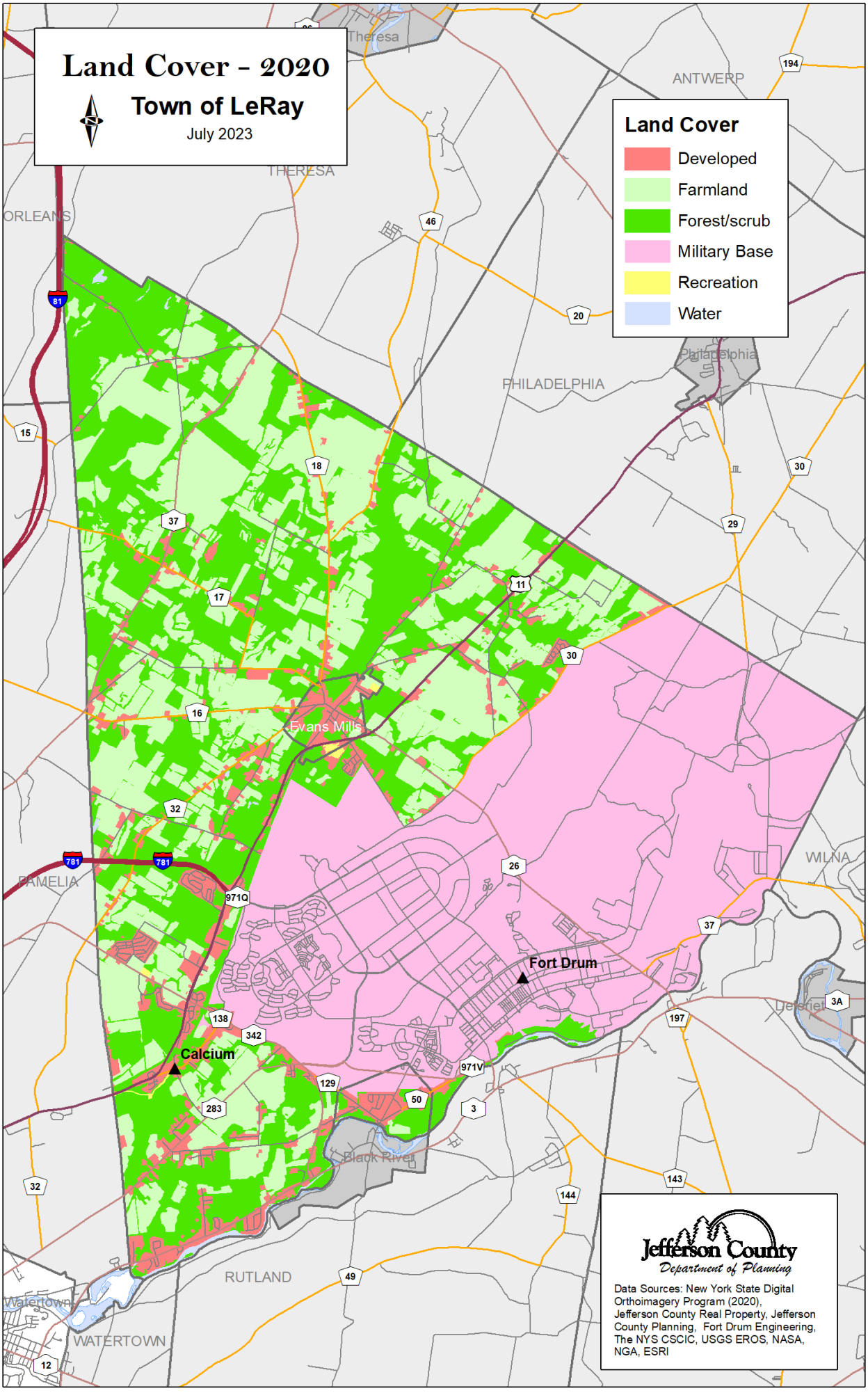
Farmland – The farmland area comprised 27% of the Town in terms of acreage. These included areas of pasture, or areas planted and managed such as hay, row crops, and grains. It also included the farmstead, being the home and barns as well.

Developed – Developed areas comprised 7% of the Town and included residential, commercial, mixed uses, and vacant structures that may be underutilized. It included the Villages of Evans Mills, Black River, and Hamlet of Calcium, and many of the Black River shoreline areas where homes predominate.

Recreation – Recreation areas made up a small percent of the mapped area (0.1%), as they only included school playgrounds and the Calcium Trail as described in the Community Facilities Chapter. All other recreation areas were coded as their predominant land cover types.

Figure 54. LAND COVER in ACRES
Town of LeRay (includes Villages) - 2020




Land Cover - 2020
Town of LeRay
July 2023
Land Cover
Developed
Farmland
Forest/scrub
Military Base
Recreation
Water
Theresa
ANTWERP
THERESA
ORLEANS
PHILADELPHIA
Philadelphia
Evans Mills
WILNA
PAMELIA
Fort Drum
Calcium
Black River
RUTLAND
Watertown
WATERTOWN
Jefferson County
Department of Planning
Data Sources: New York State Digital Orthoimagery Program (2020), Jefferson County Real Property, Jefferson County Planning, Fort Drum Engineering, The NYS CSCIC, USGS EROS, NASA, NGA, ESRI

The land cover types were then used along with land use data to categorize the Character Areas throughout the Town. Categories are described below.

Land Use, Land Cover, Landscape = Character Areas

A character area is a portion of the town or community with distinct features, shared identity, and characteristics that differ from neighboring areas. The above described agricultural, year-round residential, seasonal residential, commercial and recreational land uses, when recognized within their associated landscape, landform, and land cover types, comprise a number of distinct areas throughout the Town. Many such land use/landscapes are considered special and unique with their own characteristics that make a multitude of areas in the Town and Village attractive places to live, work, and visit.

Therefore, the character areas were mapped to identify such places and emphasize the importance of the Town's rural character and land uses within their landscape context. The intent behind identifying the Character Areas is to consider appropriate future land uses and how they may fit within or impact a given area.

The Town's character areas were generalized and mapped using aerial photography, land use parcels by assessment category, NYS Certified Agricultural districts, and categorized into Character Areas identified throughout the Town of LeRay.

The Existing Character Areas Map shows their locations and general areas of extent. The specific Character Areas are listed below:

Farmland Character Area – Farmland areas are dominated by large fields utilized for crops and/or grazing. In addition, there are farmsteads mapped within the farmland area. Portions of US Route 11 and NYS Routes 26, 37, 283, and 342 as well as County Routes 16, 17, 18, 30 and 32 consist of farmland.

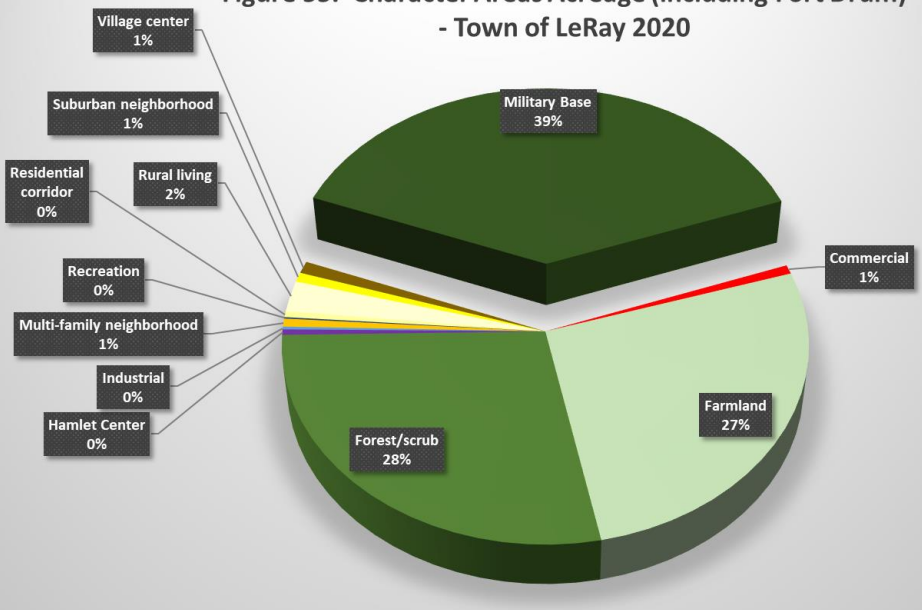
Forest/scrub Character Area – Such areas include deciduous and some coniferous trees, with a high percentage of the land that is forested or covered by early successional scrub brush/trees that grow after farm fields are not cultivated or cleared for a number of years. Some areas include grasslands, creeks and wetlands. Portions of NYS Routes 37, and US Route 11 as well as many Town Roads and County Routes intersect Forest/scrub character area.

Rural Living Character Area - The Rural Living Character Area represents homes along farmland and/or forest outside of village/hamlet areas. Within these areas, housing may not occupy the largest portion of the land, but large lot and small parcel residences were mapped. Rural residential occurs along many of the Town and County Roads, and many portions of the State Roads.

Village/Hamlet Center Character Area – The Village/Hamlet Center areas are relatively compact with more suburban style

development focused along stretches of main streets, state highways, or near primary intersections. The land use mix of these population centers typically includes residential with occasional retail, services, offices, restaurants, schools, churches, parks, or municipal buildings. While in some cases they are near commercial businesses, village/hamlet centers contain single and multi-family homes. On some main streets, sidewalks may exist or be broadened to allow for enhanced pedestrian activity and the streetscape that typically includes street trees, light poles, and other amenities. Overall, these centers play a major role in defining the image and quality of life for their respective village or hamlet, and their surrounding town areas.

Figure 55. Character Areas Acreage (including Fort Drum) - Town of LeRay 2020



Source: New York State Digital orthimagery Program (2020); Jefferson County Planning Dept. 2023; Jefferson County Real Property, 2023

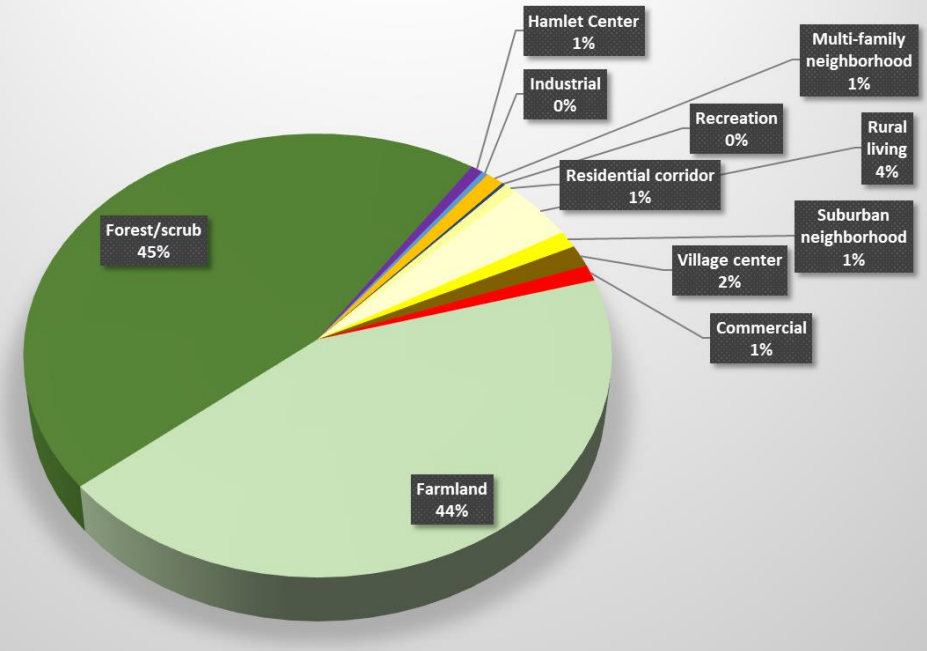
Commercial Character Area – The commercial areas include areas of business activity such as small and large retail, motels, hotels, restaurants, convenience stores, and other businesses that may be near the villages and hamlet centers, or scattered throughout farmlands, forests, rural living, and/or any other areas. They often occur along major highways where traffic levels provide a consistent source of exposure to potential customers (along US Route 11 and NYS Route 342). A few occur along NYS Route 3, but that stretch of highway consists of primarily residential with a few scattered mixed uses. Such areas outside the villages and hamlets is often more suburban in character than the surrounding rural areas. Where the Village/Hamlet character areas include a greater density of services and development.

Outside the village/hamlet centers, many properties are designed primarily for access by automobile, although pedestrian activity does occur and should be incorporated to diversify traffic types and make the Town a more inclusive destination for all travelers.

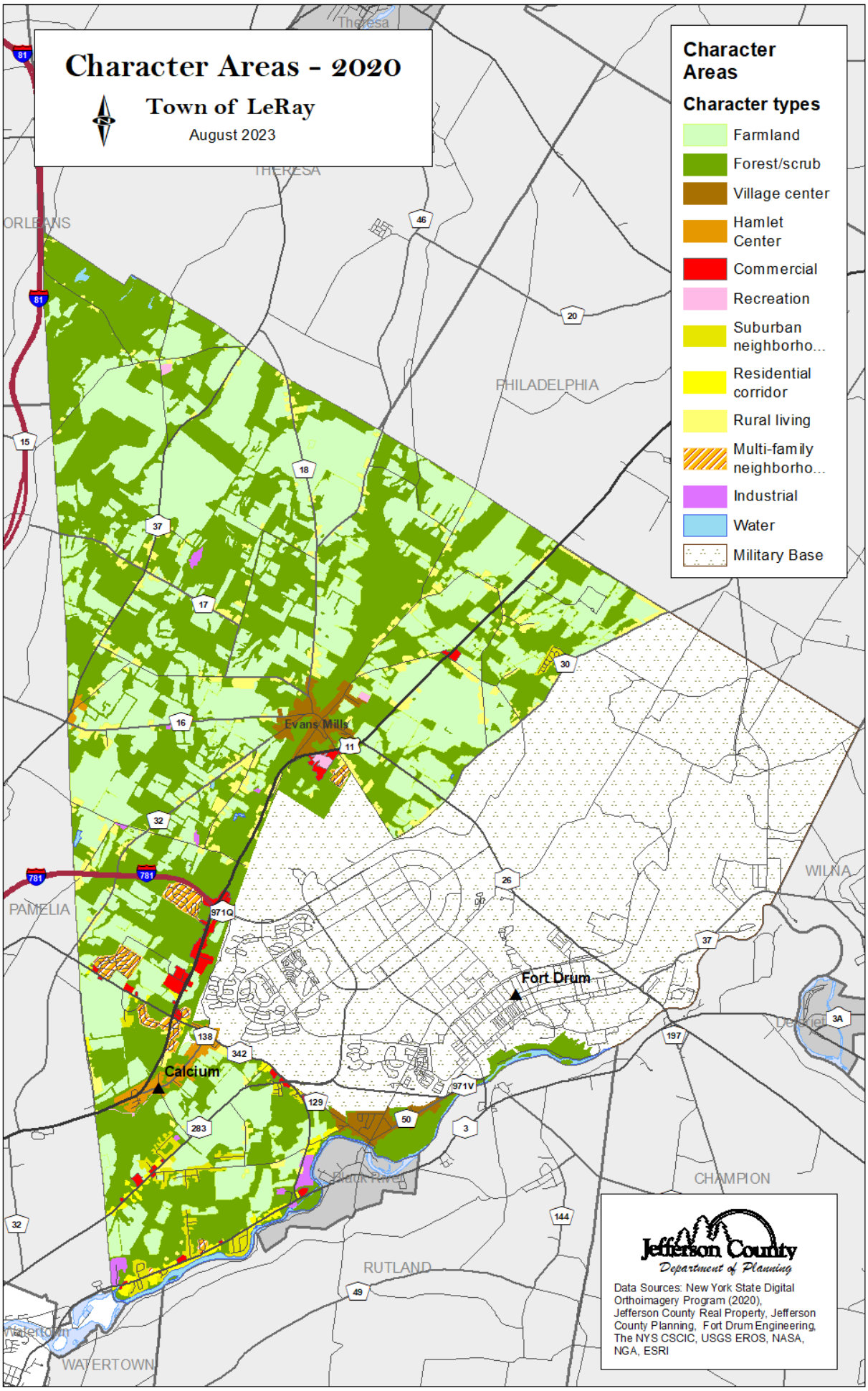
Recreation Character Area – The Recreation Character area consists of parks, trails, playgrounds and other lands set aside for

recreation purposes unless they were within a village or hamlet character area.

Figure 56. Character Areas Acreage (Fort Drum acreage removed) - Town of LeRay 2020



Source: New York State Digital orthimagery Program (2020); Jefferson County Planning Dept. 2023; Jefferson County Real Property, 2023


Character Areas - 2020
Town of LeRay
August 2023
Character Areas
Character types
Farmland
Forest/scrub
Village center
Hamlet Center
Commercial
Recreation
Suburban neighborho...
Residential corridor
Rural living
Multi-family neighborho...
Industrial
Water
Military Base
Evans Mills
Fort Drum
Calcium
PHILADELPHIA
THERESA
ORLEANS
PAMELIA
WILNA
CHAMPION
RUTLAND
WATERTOWN
Jefferson County
Department of Planning
Data Sources: New York State Digital Orthoimagery Program (2020), Jefferson County Real Property, Jefferson County Planning, Fort Drum Engineering, The NYS CSCIC, USGS EROS, NASA, NGA, ESRI

were still categorized as forest/scrub.

Suburban Neighborhood Character Area – Suburban Neighborhoods include slightly more dense single family residential areas often designed or laid out in single developments or developed over time with similarly sized lots along local streets with distinct character or layouts. Quite a few have sewer and water service. Riverglade, Admirals Walk, Patricia Drive, Twin Oaks Drive and Riverbend Drive are a few examples of suburban neighborhoods.

Multi-family Neighborhood Character Area Multi-family neighborhoods were developed at one time as multi-family attached buildings, but with distinct character. A few in the Town were originally constructed for the military and their families but have since been privatized. Others, such as Colonial Manor, for example, were constructed for either civilians or soldiers from their inception.

Future Development

Each character area within the Town should be considered when developing or amending respective zoning regulations and allowable uses. Prospective development should enhance or add to community and rural character and should minimize potential negative impacts within the community.

Future Land Use

The future land use map is a community's visual guide to future planning or desired uses. The future land use map should bring together most if not all the elements of the comprehensive plan such as natural resources, economic development, housing and transportation. It is a map of what the community wants to have happen: not a prediction. It shows a community's general preference for how it wants to use its public and private lands within a given timeframe, commonly 10 to 20 years or more.

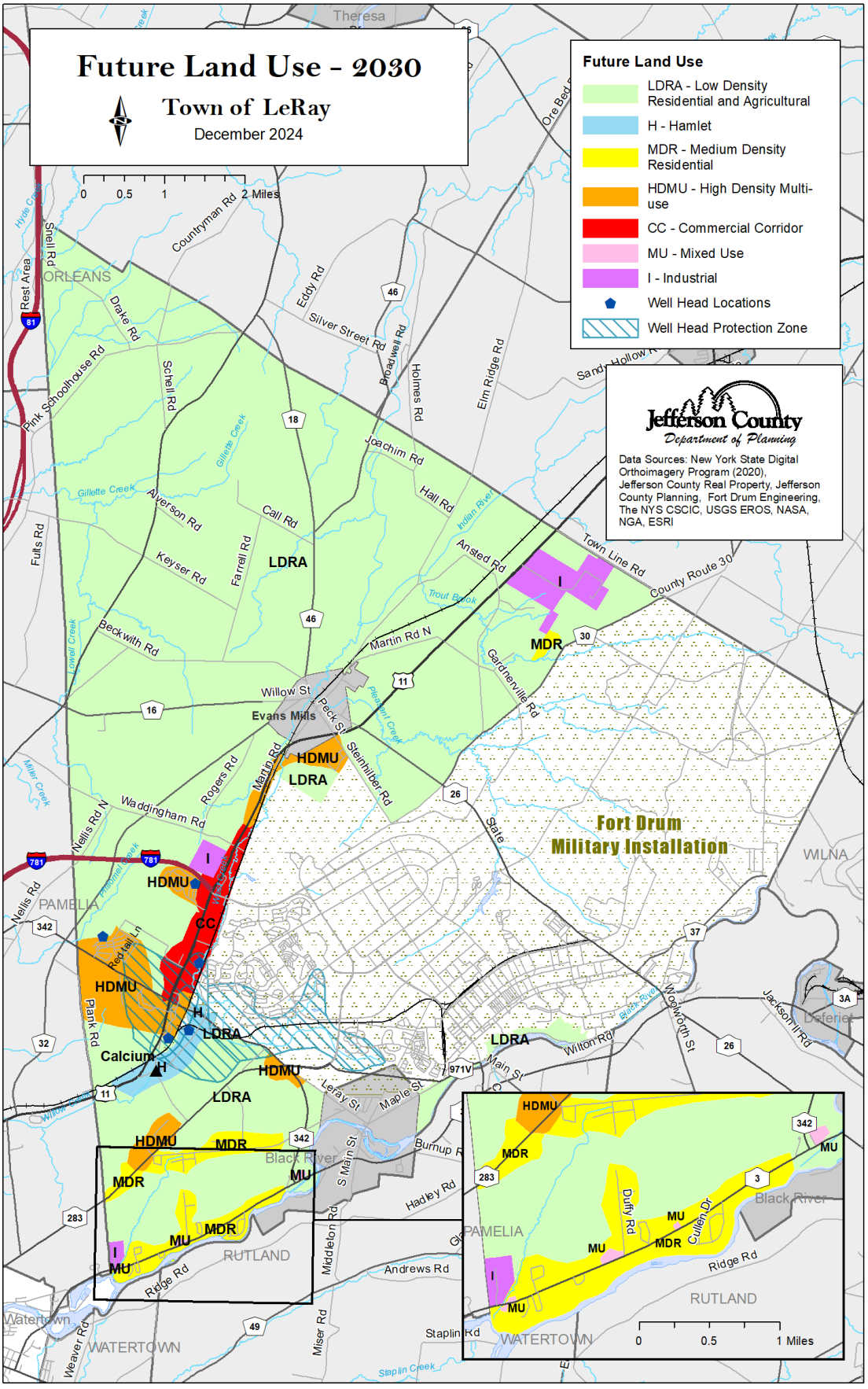
The map shows the community's shared vision regarding where housing and businesses should be built, where farmland and other open spaces should persist, for example.

As expected, future land use patterns will continue to be defined by the existing settlement patterns of previous generations as well as market forces and the unique natural features that define the landscape of the community. Consideration must be given to various physical features in the community such as streams, lakes, ponds, wetlands, floodplains and steep slopes. Access to adequate roads and proximity to existing or potential public utilities are also important factors that define the capacity of land to accommodate different types of development in the future.

It should not be interpreted that future revisions to the Zoning Map need to follow the boundaries of the Future Land Use Map precisely, nor is it necessary for the names of the zoning districts to match the generalized future land use categories. For instance, during the zoning update process, the generalized future land use categories may be broken down further to accommodate different uses and levels of intensity within each category and could be

denoted differently on the Zoning Map. Rather, changes to the zoning regulations should be consistent with the overall intent of the Future Land Use Map, while also taking into consideration the general vision expressed in the entire Comprehensive Plan, not just this chapter.

The following chapter outlines the Town Vision Statement, Goals and Strategies, and a series of considerations to use when deliberating the merits and scope of potential development proposals and applications while implementing the Comprehensive Plan.



Contents

LeRay Vision Statement – 2023

"The town's vision is to continue to hold onto its rural character and leverage sustainable growth while preserving its natural, small-town atmosphere, agricultural, business and Fort Drum friendly status"

"Much of LeRay's quality of life depends on its rural environment – scenic views, working farms and wildlife habitat. Along with great schools and its small-town friendliness - our residents, farms and businesses continue to cherish these assets."

"Being a support community for Fort Drum and the 10th Mountain Division also inspires the town's market attractiveness, diversity and quality of life. These assets continue to lead to new development opportunities, amenities, and challenges".

Town of LeRay Comprehensive Plan Committee

Land Use Goals

1) Prioritize infill development where municipal services and capacity can accommodate growth.
2) Protect existing land uses, to maintain harmony and compatibility among different uses.
3) Maintain compatibility among conflicting uses, especially concerning the viability of farming/agriculture, and Fort Drum deployment and training activities.
4) To preserve the viability of Fort Drum including Wheeler Sack Army Airfield and the Watertown International Airport, military and airfield compatibility must be major priorities.
5) Ensure development within hamlets complements their historic scale and character.

Land Use Strategies

LS 1. Allow for higher density and larger scale development (where appropriate) in historically developed locations such as commercial corridors and hamlets, especially where municipal water and sewer services and capacity exists.

LS 2. Preserve the quality of life for residential uses and residential neighborhoods from incompatible development. Infill opportunities should occur while using compatibility guidelines.

LS 3. Incorporate Fort Drum land use compatibility into the Town Zoning Law relative to flights to and from the Wheeler Sack Army Airfield, training range activities as well as rapid deployment maintain their respective viability into the future.

LS 4. Similarly, incorporate Watertown International Airport compatibility into the Town Zoning Law relative to flights to and from the airport to ensure its viability into the future.

LS 5. Consider use, neighborhoods and character (use the term from the Comp Plan Chapter) when applying compatibility guidelines.

LS 6. Refine/update the permitted uses within and update the wellhead protection zones to safeguard all the Town's wells (public owned sources of water).

Transportation Goals

6) Maintain traffic flow on main traffic arteries (US Route 11, NYS Routes 37 and 342) by promoting shared driveways, minimizing the number of curb cuts, and maintaining cross property access to limit users having to use the main highway to get from one business to another.
7) Foster alternative modes of transportation to increase accessibility and decrease the dependence on vehicles.
8) Enhance pedestrian access within parking lots, among businesses and along traffic corridors between dense residential generators and destinations to accommodate alternative modes of transport.
9) Accommodate Amish buggies and pedestrians with wider shoulders in key areas, especially to destinations such as schools, Town Offices and businesses.
10) Examine the need for pedestrian connections as well as bike lanes along corridors.

Transportation Strategies

TS 1. Identify viable areas such as the Commercial Corridor along US Route 11 for potential pedestrian improvements.

TS 2. Pursue non-motorized trail connectivity to tie into existing trails, thus broadening the systems to add value in the Town which can lead to additional development opportunities and quality of life benefits. Offer incentives to landowner participation/buy-in for trails.

TS 3. Examine the need for pedestrian/trail connections to the County bus transit stop.

TS 4. Consider grant funding options for a pedestrian system (sidewalk construction, maintenance and/or liability insurance) within the commercial corridor where sidewalks are needed most.

Community Facility Goals – Sustainability

11) Protect LeRay's wellhead protection areas to maintain clean, potable water for residences and businesses.
12) Promote the use of green infrastructure to control and limit stormwater runoff impacts such as localized flooding and contamination.
13) Encourage accommodation of renewable energy projects in suitable areas while minimizing potential impacts on priority agricultural soils (prime, prime if drained, and soils of statewide importance); residential areas; and Fort Drum operations.

Community Facility Strategies

CFS 1. Establish requirements for the use of green infrastructure to decrease stormwater flow and minimize erosion.

CFS 2. Incorporate green infrastructure criteria/standards to minimize stormwater impacts within commercial areas.

CFS 3. Ensure LeRay's wellhead protection zone measures for Town wells become part of the zoning law and zoning map to protect public water supplies.

CFS 4. Promote community scale "on-site" or "resident friendly" solar energy facilities to benefit town businesses and residents.

CFS 5. Ensure renewable energy maintains adequate buffering/screening and agricultural/residential compatibility where required.

Housing Goals

14) Promote and maintain a variety of housing types to ensure affordable options exist, to include affordable housing for seniors and/or assisted living for seniors.
15) Locate housing near employment, schools and shops to maximize pedestrian trips.

Housing Strategies

HS 1. Pursue incentives to foster affordable or middle-income housing in key areas within the Town with either pilots, a housing bank or other developer incentives.

HS 2. Similarly, pursue incentives to foster affordable retirement housing options within the Town to enable residents to age-in-place if so desired.

HS 3. Promote additional housing near schools, employment centers and commercial areas to promote walkability.

Natural Resource Goals

16) Preserve and enhance open space, farmland, and natural beauty to maintain scenic quality, help define rural character, community character and recreational opportunities.
17) Implement MS4 stormwater management enhancements to protect the environment; reduce flooding to protect people and property; reduce demand on public stormwater drainage systems; support healthier streams and rivers; and foster healthier, more sustainable communities within the Town.
18) Continue to work with Fort Drum staff regarding potential candidate parcels within the Army Compatible Use Buffer (ACUB) Program.

Natural Resource Strategies

NRS 1. Establish open space and/or character-based requirements for the Agricultural Residence Zoning District.

NRS 2. Consideration for habitat connectivity thus limiting wildlife habitat fragmentation should be part of subdivision and project reviews if/when applicable.

NRS 3. Wildlife friendly fencing should be considered during project reviews with wetlands on or near the site, or near wildlife habitat areas.

NRS 4. Natural resources should be incorporated into project design when applicable to preserve priority features/views.

NRS 5. Stormwater management facilities should utilize green infrastructure methods to minimize downhill/downstream runoff impacts on natural systems, neighboring properties, and transportation system drainage facilities.

NRS 6. Include MS4 Minimum Control Measures within the Zoning Law where applicable.

NRS 7. Include the latest standard for 5, 10 and 25-year storm rainfall events for retention/detention basin design to handle storm amounts based upon current storm activity.

NRS 8. Study and map all Town well – groundwater infiltration or aquifer recharge areas that flow into the public water supply wells.

Table 14. Town of LeRay Wells:

1 & 2. "A" Site Pump Station (two wells) - Stalder Rd/US Rte 11,

3. Irving Place Pump Station - NYS Route 342,

4. DOF Pump Station – US Route 11,

5. Carey Well Field (not in operation) – US Route 11,

6. Ryor Well Field – CR 138 (Sanford Corners Rd) near the CSX Rail line.

Development Form Alternatives: Conventional vs Creative

The following images illustrate development scenarios based on conventional vs creative forms. They illustrate an area before infill development, then the same area with conventional infill development, and that area with a creative form of infill development.

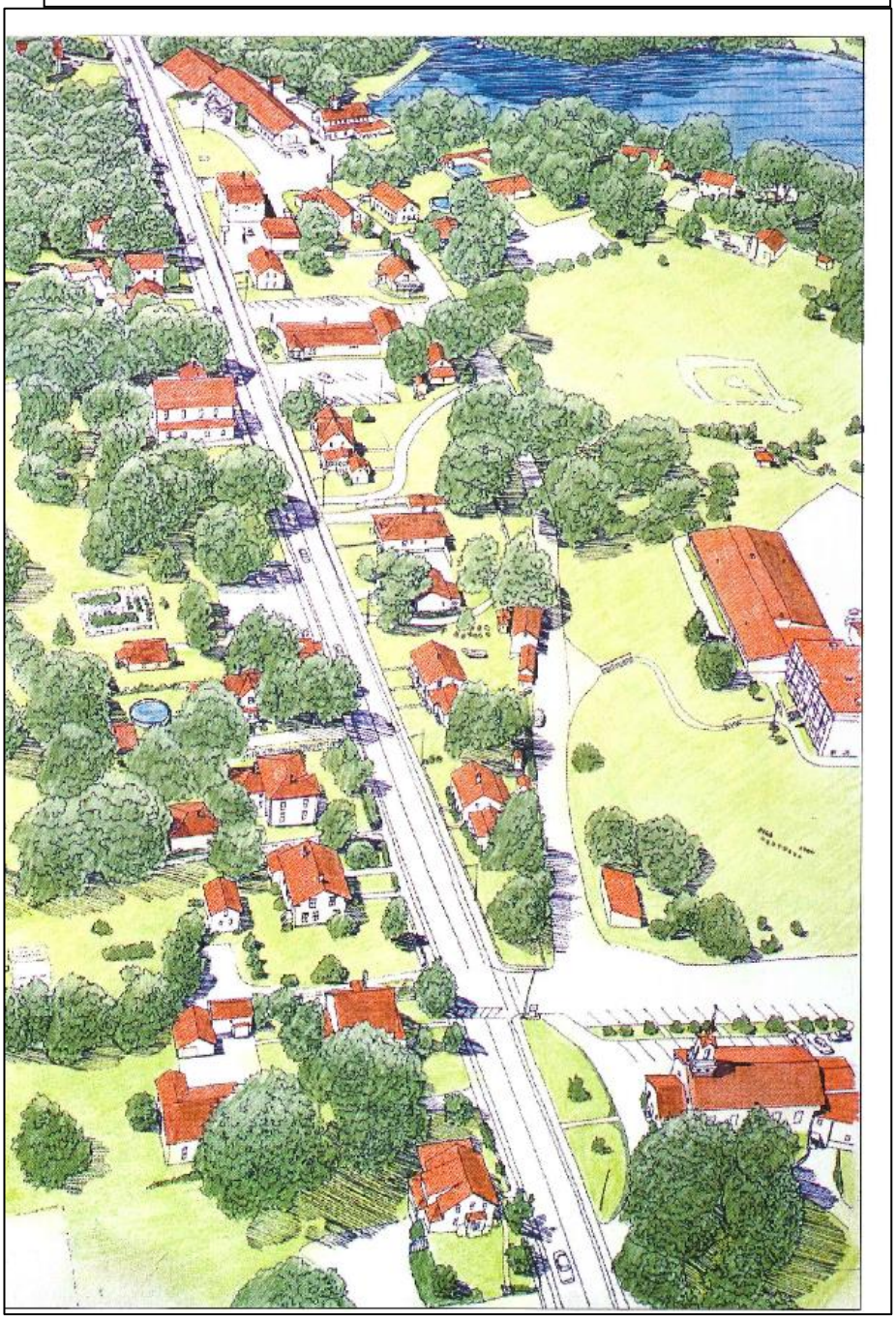
Historic Hamlet Center

This example demonstrates a mix of residential, commercial & institutional uses in an Historic Hamlet Center infill development scenario from a publication: *South County Design Manual: South County Watersheds Technical Planning Assistance Project - 2001*.

Historic homes, commercial buildings, brick mills, churches, and other buildings along Main St. variety in size, shape and architectural styles, unified by the scale and function of Main St.

When determining future development requirements for the Town of LeRay, consider form and function priorities for new development and how it may relate to the existing community form and functionality in both residential and commercial areas.

Historic hamlet center - prior to infill development



New gas station /convenience store follows corporate site plan, breaking the street wall by setting the building toward the rear of the lot. Bright colors and corporate logos dominate the canopy, brilliant lights at night move even further from local tradition.

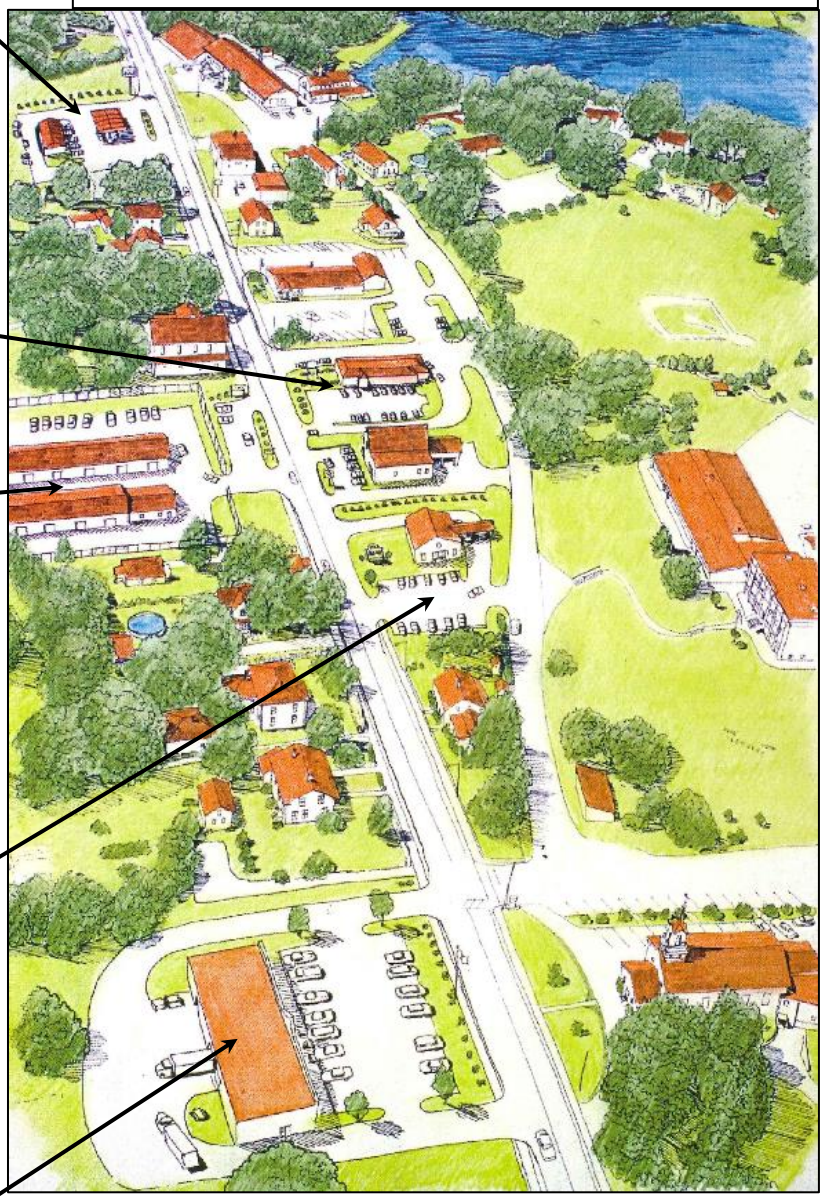
Replacement of historic home with doughnut shop removes an element that was unique to hamlet in favor of standardized building, parking lot, and drive-through.

Storage units in the center of the hamlet replace active uses with functional dead zone. Since most access with need to be by car and truck, little reason for interaction with surrounding uses. Structures tend to be long, flat, and out of scale with the neighborhood.

Conversion of existing buildings from residential to commercial use. Ad hoc redevelopment of individual lots and excessive parking requirements promote inefficient use of space and over-paving.

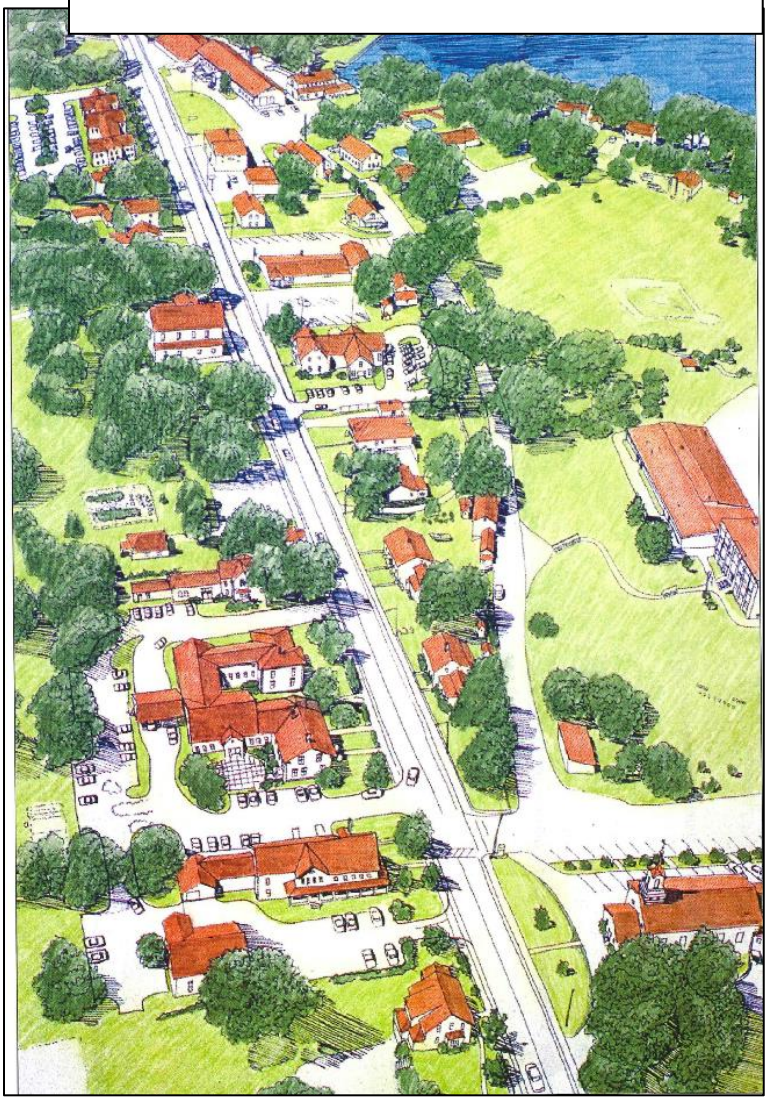
Historic homes replaced with strip mall. Typical design approach calls for parking in front, service access in rear, two curb cuts for ease of vehicle access. The result is a design that is very convenient for people in cars, but isolated from the surrounding community by asphalt.

Aerial view of Historic Hamlet Center - after potential Conventional Infill Mixed Development



Functionally, it is still a 19th century hamlet, with homes, a school, churches, commercial and government uses in close proximity. Currently is a walkable community, with a high degree of livability and sense of place. However, the infill projects should not introduce barriers to pedestrian accessibility and a loss of historic fabric.

Aerial view of Historic Hamlet Center - potential Creative Infill Mixed Development



Historic Hamlet Center – Creative Infill

Design concept: New uses are required to fit within the visual character and physical patterns of the existing hamlet, rather than the other way around. The emphasis is on maintaining a compact, pedestrian-friendly environment, while meeting the demands of the marketplace for convenient vehicular access and parking.

Land Uses: A mix of residential, commercial, institutional uses would be encouraged, with an emphasis on smaller scale businesses that could fit into existing buildings or new buildings at a compatible scale.

Access: shared curb-cuts between parcels reduce conflicts between cars and pedestrians and improve the streetscape appearance. Driveway connections cross lot lines, which minimizes the number of curb-cuts and allows customers to visit neighboring businesses without pulling back onto Main Street. Drive-thru windows and associated queuing lanes at the rear of buildings allow a needed function, for many modern businesses, while keeping the streetscape pedestrian friendly.

Parking: Parking lots at the side and rear of structures break areas of asphalt up into smaller units more in scale with existing structures. Plantings can also separate areas to keep asphalt to a minimum.

Architecture: Existing buildings are retained, with additions placed to the rear in compatible architectural styles. Larger uses are accommodated by connecting existing buildings together.

Landscape: Shade trees would be added, and existing trees preserved which would shade new parking lots and reduce their apparent scale. Evergreen shrub plantings screen parking from view.

Streetscape: Improvements to and maintaining sidewalks, addition of benches

and trash receptacles, and pedestrian-scale street lights encourage people to walk to and between uses. Existing utilities could be buried, improving the appearance of the street, opening up views of historic structures and preserving trees.

Pedestrian enhancements: Sidewalks renovated to provide easy pedestrian access to surrounding parcels. Landscaping helps to screen parking: design and materials follow shared Main Street landscaping guidelines.

Zoning Challenge: Sometimes, current zoning such as in this example (Historic Hamlet center), lot size and setback requirements, minimum areas for parking, and open space requirements for each building lot can make it hard to build without tearing down existing buildings and consolidating lots. While this slows development, sometimes it's only a matter of time before the rewards to develop outweigh the costs of pursuing this inefficient style of development.

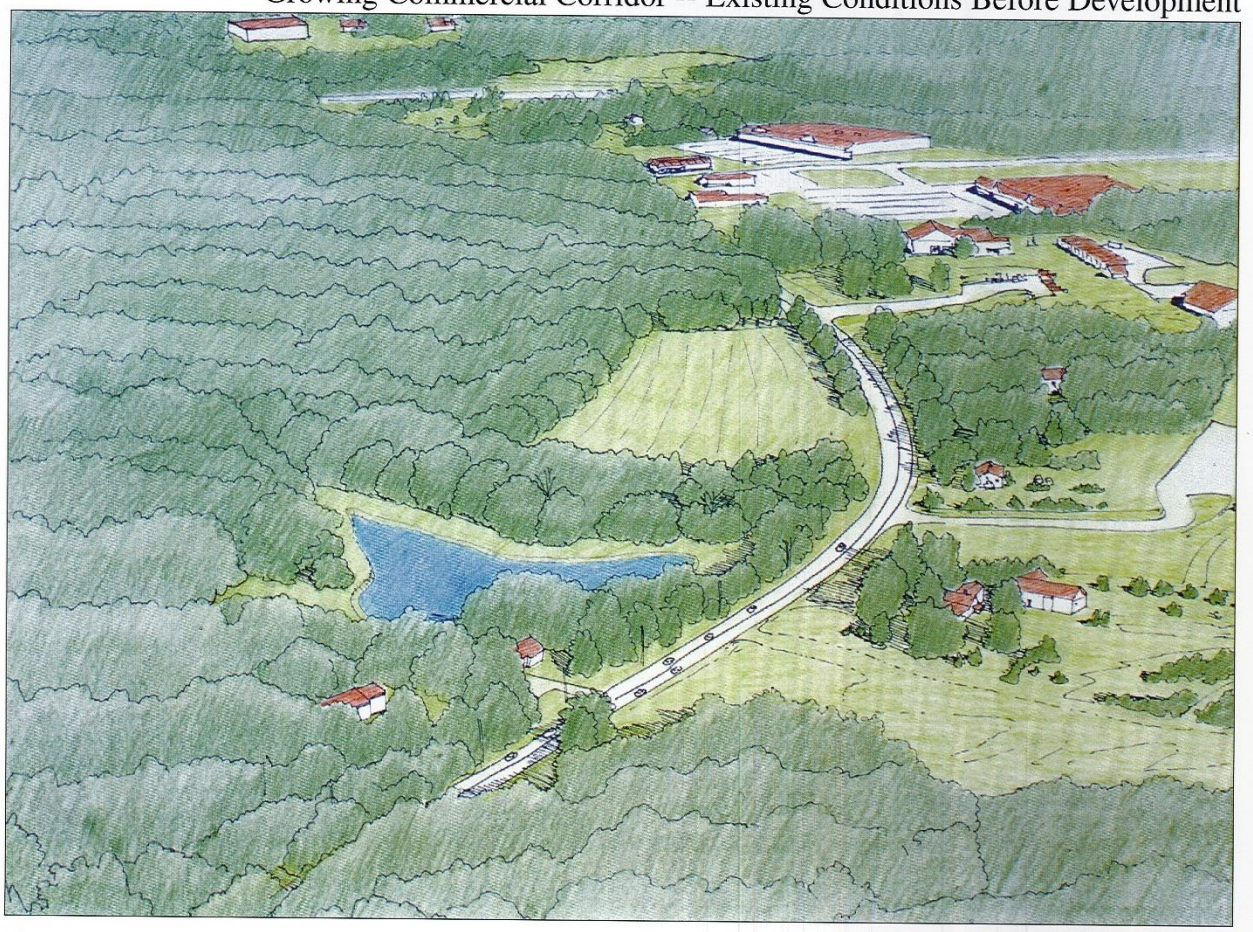
Today's development is often driven by or mainly to be accessible by the automobile. The result often does not relate to the existing hamlet in either scale or appearance, due to it favoring the automobile over pedestrians (which erodes walkability), and which almost ensures the loss of historic character and architecture that remains in the hamlet.

Maintaining accessibility for all users as called for by Complete Streets policies as described in Chapter 4. should be a priority for new development today, and should result in development forms that complement our commercial areas, hamlets and villages alike.

LeRay Priority

Hamlets in LeRay would benefit from infill development that duplicates the form and function that make each hamlet historic and special. Pedestrian orientation, efficient parking options, connectivity to trails and other destinations, and other features that make them attractive to live, work and recreate should be duplicated where feasible.

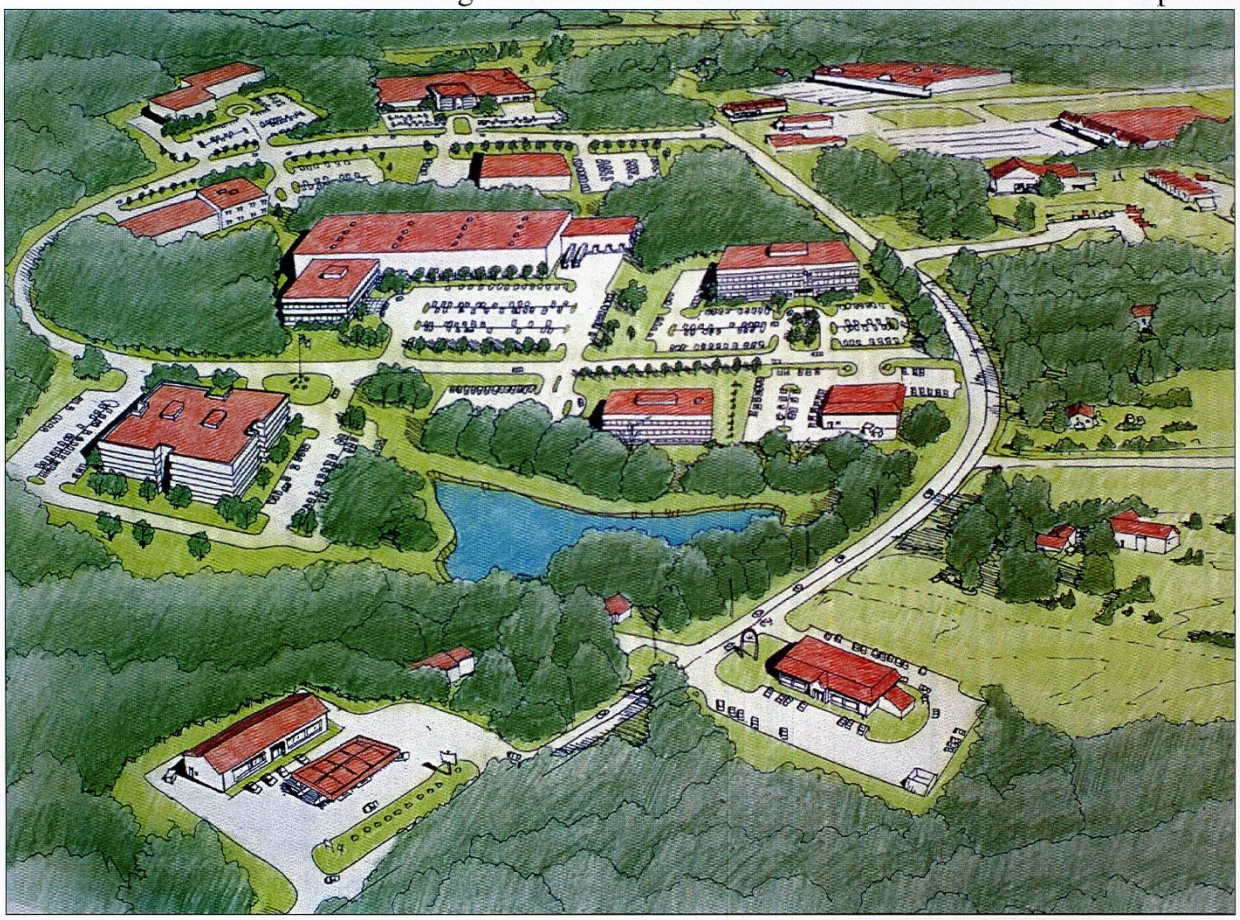
Growing Commercial Corridor -- Existing Conditions Before Development



Growing Commercial Corridor – Introduction to the Site

The example study area consists of some town government buildings and a shopping center, along with sparsely developed road frontage which has experienced some piece meal development over a period of years resulting in an ad hoc commercial strip. Thus far, coordinated planning efforts have not led to a cohesive sense of place, nor any appreciable investment in local roads which could benefit the area by allowing development to occur without exhausting the main road frontage. Therefore, the larger parcels behind the road frontage, meanwhile, have been waiting for the market to support the investment in access roads and site preparation that would be required for their development to unlock this potential.

Growing Commercial Corridor -- After Conventional Development



Growing Commercial Corridor – Conventional Development

Without an overall plan for the entire area or district, development continues on a parcel-by-parcel basis. Larger lots offer a chance for more coordinated development, but as with residential subdivisions, the commercial review process is geared toward more building safe roads and parking lots than to building a community. Market forces can often run contrary to planning and coordination and can't often depend on the next project which may not occur. Often what occurs over time are places without centers, common areas, or places that relate to the area or contribute to the visual character or quality of life in the community.

Growing Commercial Corridor -- After Creative Development

Growing Commercial Corridor – After Creative Development

Design Concept: All the uses usually found in a commercial strip are accommodated in a more traditional hamlet or village layout.

Access: A simple grid of streets provides access to all uses, limiting points of access on the main highway and linking all parts of the development together for easy internal circulation by both vehicle and pedestrians.

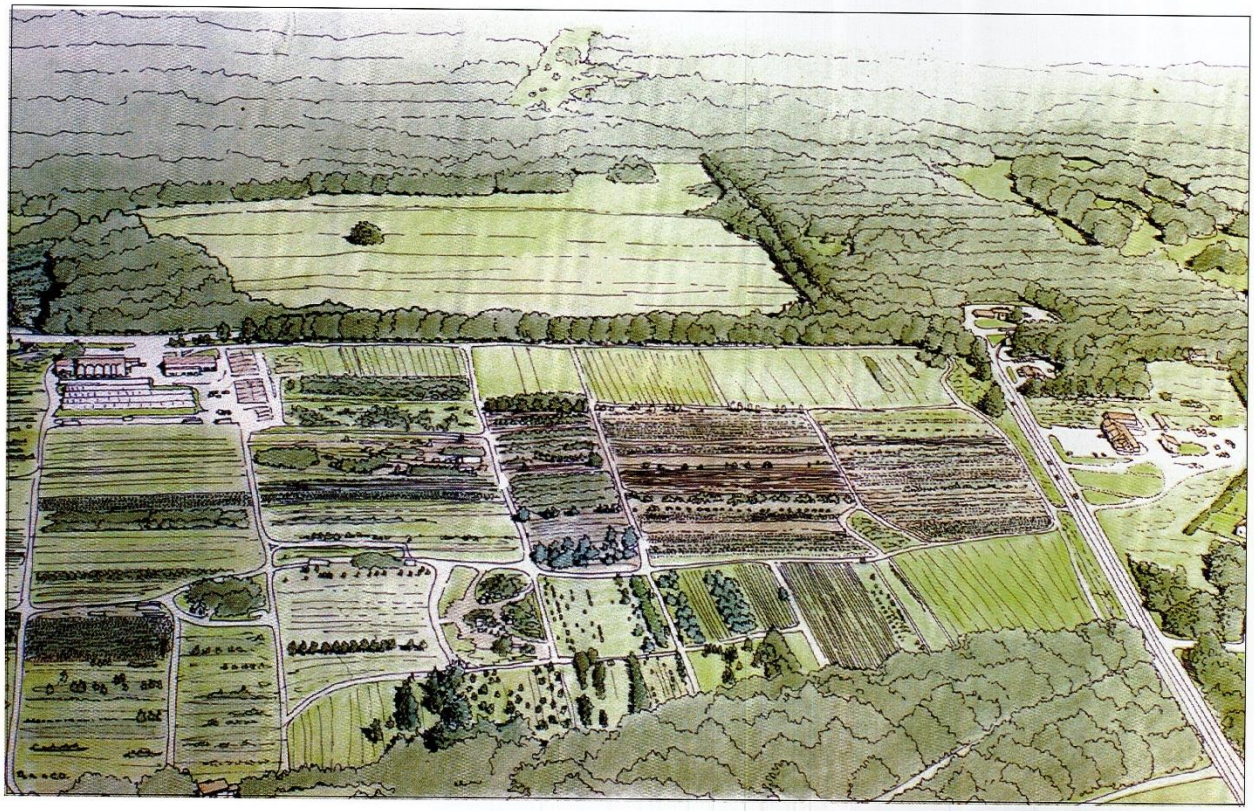
Parking: On-street parking allows for convenient short term parkin, larger lots in the rear provide for all day parking for office workers, all night for apartment dwellers.

Architecture: A consistent/complementary architectural theme is applied regardless of use, so that offices, gas stations, banks and restaurants share a common vocabulary which could be locally inspired such as stone materials.

Streetscape: The street network is the primary organizing element of the design. Buildings are drawn up to a consistent set-back line, creating an enclosing wall. Sidewalks, benches, tree plantings make an attractive pedestrian space.

Overall Design Concept: the office park is used as an opportunity to create another kind of neighborhood within the larger structure of the development. In this case it is laid out as a corporate campus organized around the roads in a series of open spaces.

Agricultural District -- Existing Conditions Before Development



Parking: parking is broken up into small lots and hidden behind structures.

Access: Drop-off areas and building entrances are kept close to the public street to avoid the tendency to isolate each building on its own lot.

Architecture: A consistent architectural theme is maintained throughout the development, with peaked roofs and traditional facades reflecting the history of the area. Manufacturing or warehouse space is placed to the rear of structures, with the office wing facing the rest of the hamlet.

Agricultural Area – Existing Conditions Before Development

The example study area consists of two highways that intersect and is zoned primarily for house lots some of which are 20,000 square feet as required and 3-4 acres in another portion. The small commercially zoned area includes some businesses near the intersection. The site is a main gateway of the Town with favorable access to the highway. Thus, some would consider it to be a good development site.

The other portion would be considered part of an agricultural greenbelt which should be protected from development. In any case, there is an obvious conflict between potential uses, good access and soil conditions make the site favorable for development, while it is some of the last agricultural open space in the area.

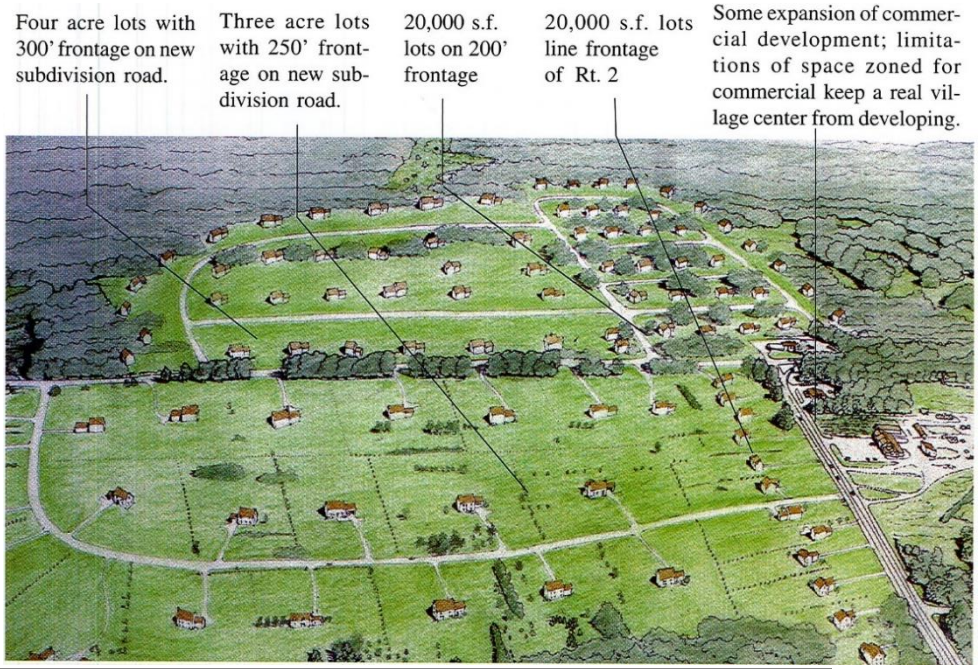
Agricultural District -- After Conventional Development

Agricultural District – Conventional Development

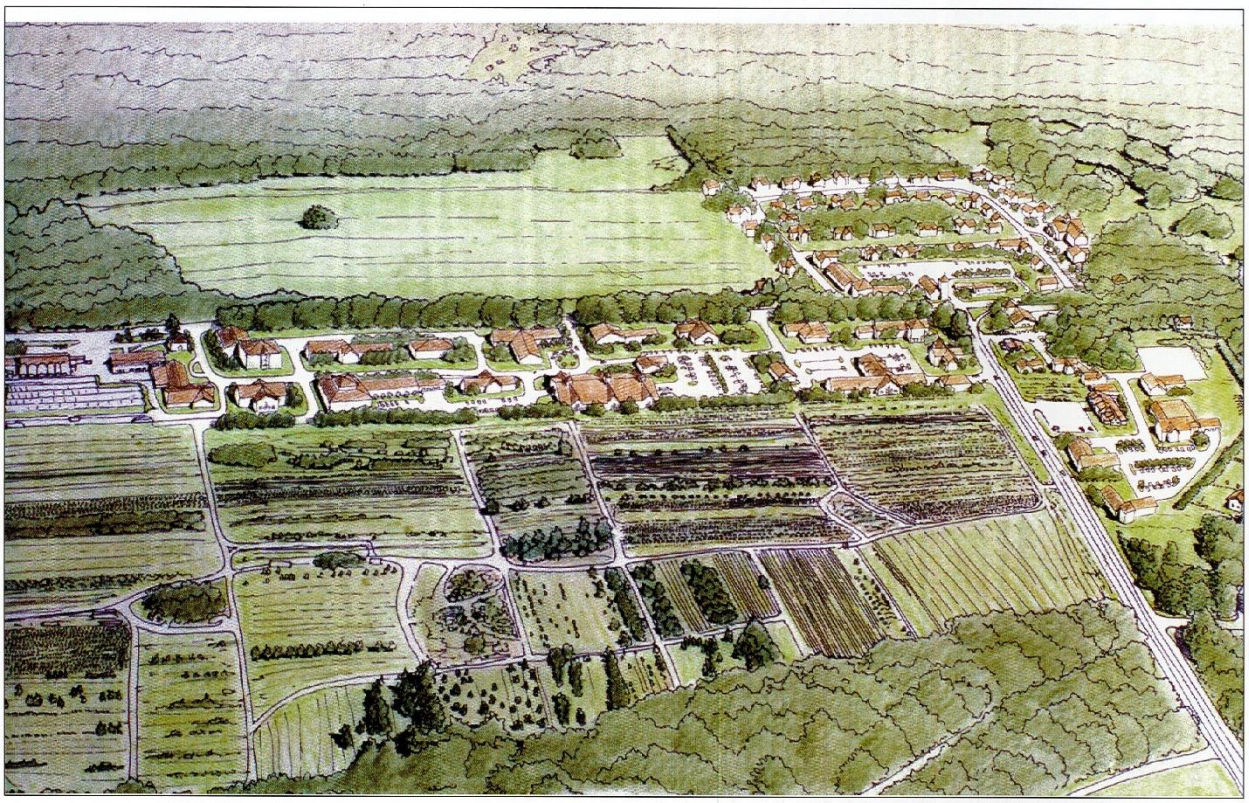
Farmers hoping to retire have few options with the conventional scenario. With half-acre lots on one side and 3 to 4 acre lots required on the other, the farmland quickly fills up with house lot subdivisions at low density on much of the land.

Disadvantages: Such large lots can slow the subdivision process if property values don't support the expense of road or infrastructure construction. But once lot prices reach a certain point, the road gets built and farmland is lost to development.

Faced with this situation, landowners push for wholesale zoning changes, often to permit large-scale commercial development. As a community realizes the fiscal impact of residential growth on their tax base and looks to commercial growth to support the cost of local schools, services, etc. Sadly, continued farming isn't very often part of the equation.



Agricultural District -- After Creative Development



Design Concept: with at least 75% of the farmland permanently protected, growth is channeled into a new mixed-use hamlet at the crossroads of the two highways. Office and commercial buildings with an agricultural enterprise theme take up the southwest quadrant now with a focus on agricultural enterprises and service businesses that do not need a highway facing presence.

Across the street existing commercial development is consolidated into a commercial core, with new residential streets rounding out the hamlet on the outside. All the way around a clear edge established between hamlet and countryside, which cannot be further developed.

Landuse: part of the nursery property is developed for office and commercial buildings, with an emphasis on agricultural enterprises and services not requiring a visual presence on the highway. One possibility would be a farmers market building, which would serve as an agricultural market incubator – a place where small producers can come together to sell their products directly to the public.

Access: curb cuts are limited to maintain the safety and attractiveness of the existing roadside. Entry roads lead to shared drop off areas for groups of buildings.

Parking: large, shared parking lots hidden behind buildings serve multiple businesses. Lots are broken up into smaller units by landscaped islands to provide shade and visual relief from acres of asphalt.

Residential Development: traditional residential streets link neighborhoods of houses to the hamlet center. Many of these have direct access to protected open space.

Recreation: In this example, a new golf clubhouse creates a focal point for this area of the hamlet and a location for community functions. Other types of focal points could also be successful.

Interior Parking: Large, shared parking lots in the interior of the block provide convenient access to commercial uses without impacting/spoiling the view from the road.

Architecture: Structures of all types could share a common theme: peaked roofs, complex massing, upright proportions, and traditional window placement or other details. The most visible locations could be reserved for civic or commercial buildings, which would help give hamlets some landmarks and enhance their sense of place.

Existing Commercial Uses: Existing businesses are encouraged to grow and expand in order to bring additional activity to the hamlet and use the land more efficiently. Parking lots now in front of buildings are moved to the side or rear to make room for new buildings or additions in the more visible locations. Driveway connections across lot lines are encouraged to reduce traffic on the highway and further link adjacent uses.

Pedestrian Connections: Pedestrian paths connect adjoining lots and link the hamlet with nearby subdivision streets, thus reducing the dependence on vehicles to go between uses or along the roadway under peddle power.

Overall Design Concept: Like the other scenarios presented above, the plan for the agricultural district is based on concentrating growth into a mixed-use, pedestrian friendly center or hamlet. In this case however, specific measures are used so that the development of this site helps both to preserve agricultural land and to enhance the farm-based economy. Another economic tie could be employed or utilized but the main thing is the character reinforces the economy and vice-versa which can occur in a number of ways. The positive impacts of using the clustering principle allows development to occur at a higher density than would normally be allowed, thus leaving land area to maintain the agricultural activities as well which permits open space character and benefits to continue.

Scenario Conclusions

Several of the scenarios described above involve implementing a mixed-use, pedestrian friendly center or neighborhood which are applicable ideas throughout several areas in LeRay. In ideal cases, specific measures may be used to preserve agricultural land and to enhance the farm-based economy as well as having desired development. This could involve clustering where feasible to give a greater return per developed acre and lower cost per unit utilities and infrastructure. This could also include mixed uses to enhance the neighborhood, and again garnering a higher return per acre of land including neighborhood scale commercial uses, also enhancing walkability.

Mixed uses may not be the easiest growth to implement, but the diversity and compact nature of the uses offer more bang for the development buck and typically can offer economic resilience over time. The walkability can result in less required parking again lowering development costs in terms of pavement and stormwater management including snow removal.

Design guidelines for site planning, building design, parking lots, streets, sidewalks and other features should be used to promote compatible development forms. Limits on building size or number of floors could be used to encourage compatibility in terms of maintaining the proper scale within a neighborhood. Locally prominent features such as stone could be used as a guide to encourage similar styles when applicable.

Introduction-Planning Project Considerations

The following Planning Project Considerations should be considered for use when reviewing development or redevelopment projects, updating the zoning regulation review criteria used to review projects, and establishing subdivision requirements which establish minimum standards for lot creation, road design, and ultimately, the pattern of development for generations. They are the product of discussion and thought about how development can respect the area and be shaped to complement the character of LeRay and ultimately improve the quality of life for current and future residents.

Town-wide Planning Project Considerations

Important Town design priorities:

- Retain uniform setbacks along Hamlet and mixed-use main street frontages to maintain pedestrian friendly design.
- Reduce or eliminate “saw-tooth” building placement on lots created by parcels with deep setbacks\vacancies next to shallow ones. Consider build-to line (or maximum setback) standard.
- Retain consistent building heights along a street frontage, with no more than 2.5 to 3 stories high or similar to surrounding building heights where applicable.
- Encourage similar uses on opposite sides of the street or road.
- Parking should be located to the side or rear of buildings to maintain close proximity of the building to the street.
- Orient principal building entrances toward primary streets.

- Connect building entrances to sidewalks (if present).
- Construction materials should be consistent with traditional building materials or appear so.
- Building character should emulate traditional or vernacular styles within the area as applicable.
- New development should include significant landscaping (street trees).
- Retain specimen, landmark or mature trees, especially heathy climax species along the roadside.
- Utilize only native and/or hearty species that will survive in the North Country.

Pedestrian Friendly – Pedestrian friendly projects are at a pedestrian scale, walkable distance, and with sidewalks or pedestrian paths and include being a walkable distance from other destinations such as other businesses and residential areas.

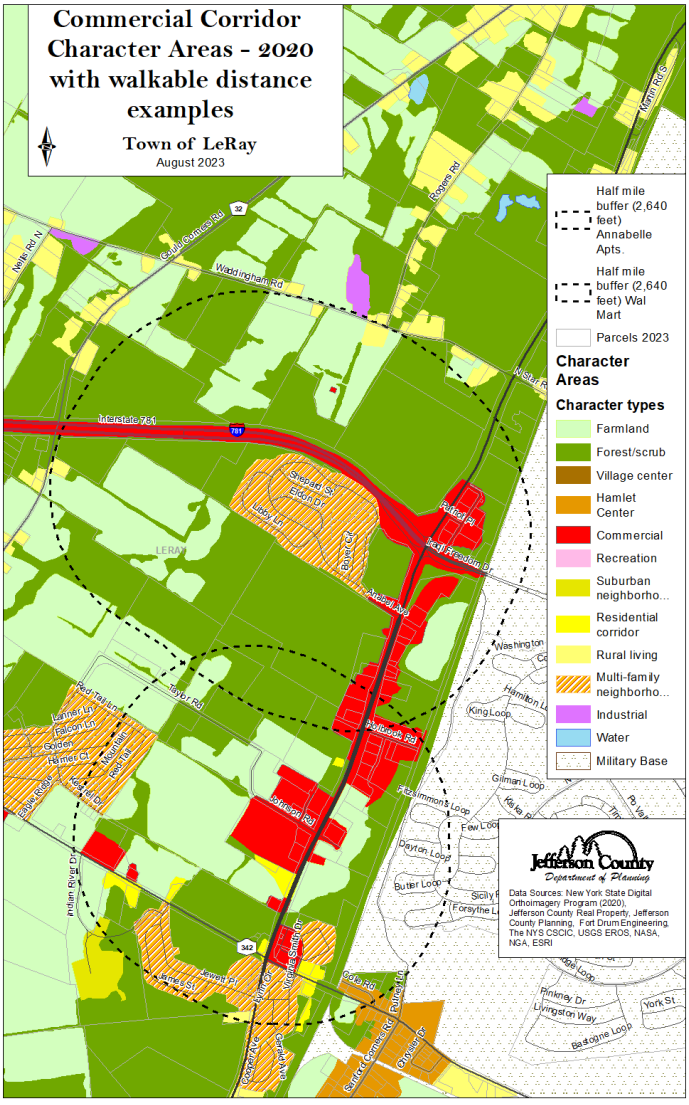
For example, the pedestrian scale typically balances pedestrian and vehicular needs while providing comfortable environments for people to assemble and associate with others. Community design should be human-scale with services within a reasonable distance from one another.

The following walkability standards are recommended: homes within ½ mile of most services; elementary schools within ½ mile of homes; parks within an ¼ to ½ mile of homes; hamlets/villages should provide a balance of retail and commercial stores and services, e.g., hair salon, hardware store, pharmacy, grocery/deli, restaurants, clothing, post office, library, town or post offices within ¼ to ½ mile of the community center. Areas not being used by pedestrians should be assessed to determine possible reasons for lack of use such as sidewalks or trails or other safety barriers.

Schools are another destination for pedestrians, especially children. Crosswalks and sidewalks or trails to walk to school should be considered.

Transit riders need sidewalks to access transit stops. Traffic arterials used by transit such as US Route 11 are prime candidates to locate a transit stop, therefore, sidewalk presence would facilitate access to the transit system.

Other internal site factors include direct connections to a building entrance from the sidewalk without having to cross rows and rows of parking or internal traffic such as drive-through lanes, etc.

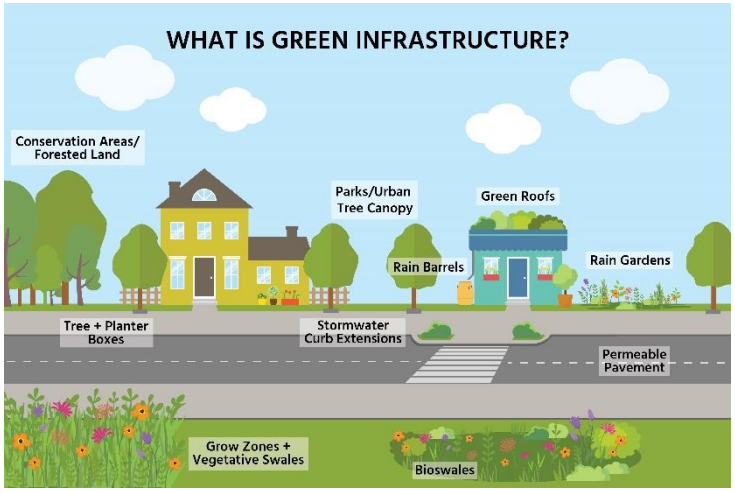


Green Infrastructure – Simply put, green infrastructure filters and absorbs stormwater where it falls. The Water Infrastructure Improvement Act, defines green infrastructure as "the range of measures that use plant or soil systems, permeable pavement or other permeable surfaces or substrates, stormwater harvest and reuse, or landscaping to store, infiltrate, or evapotranspirate stormwater and reduce flows to sewer systems or to surface waters." Runoff from stormwater continues to be a major cause of water pollution in urban areas. It carries trash, bacteria, heavy metals, and other pollutants through storm sewers into local waterways. Heavy rainstorms can cause flooding that damages property and infrastructure.

Historically, communities have used gray infrastructure—systems of gutters, pipes, and tunnels—to move stormwater away from where we live to treatment plants or straight to local water bodies. The gray infrastructure in many areas is aging, and its existing capacity to manage large volumes of stormwater is decreasing in areas across the country. To meet this challenge, many communities are installing green infrastructure systems to bolster their capacity to manage stormwater. By doing so, communities are becoming more resilient and achieving environmental and economic benefits.

Rain gardens or bio-swales can be included in medians and along parking lot perimeters. Benefits of which include less water runoff, heat island mitigation, and a more walkable and pedestrian friendly environment. Permeable pavements also reduce runoff throughout the year. Many examples of green infrastructures are listed below:

- Downspout Disconnection
- Rainwater Harvesting
- Rain Gardens
- Planter Boxes
- Bioswales
- Permeable Pavements
- Green Streets and Alleys
- Green Parking
- Green Roofs
- Urban/Suburban Tree Canopy
- Land Conservation
- Design snow storage areas with capacity for snowpack spring melt (avoiding streams and waterways)



Rain Garden (also known as a bioswale) captures stormwater as it flows down the street.

◄ - - - = drop inlet for stormwater

Responsible Outdoor Lighting

Too often, outdoor electric lighting can be over lit, left on when not needed, and harmful to the environment. Lighting, even when needed when not shielded properly, can produce excessive glare and impact neighbors, roadways, and airplane pilots, especially those training with night vision goggles as described in Chapter 6, Fort Drum Installation, Training and Airport Compatibility.

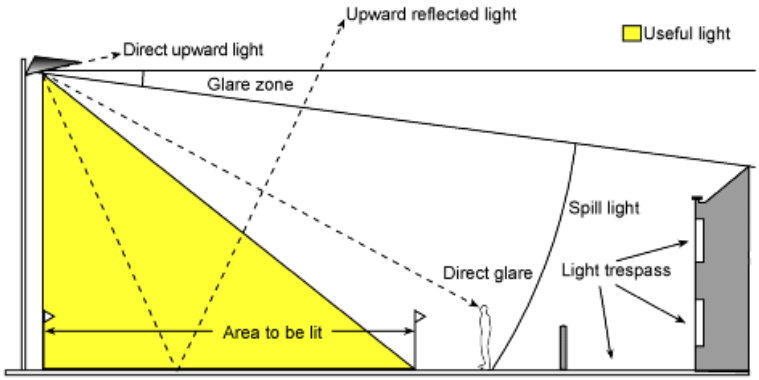
Useful light is light where it is wanted/needed. Light Trespass is light being cast where it is not wanted or needed, such as light from a streetlight or floodlight that illuminates a nearby bedroom at night making it difficult to sleep. Glare can be thought of as objectionable brightness. It can be disabling or discomforting. There are several kinds of glare, the worst is which is disability glare, because it causes a loss of visibility from stray light being scattered within the eye. Discomfort glare is the sensation of annoyance or even pain induced by overly bright sources. Think of driving along a dark road when an oncoming car or truck with bright headlights approaches. The sudden bright light can be uncomfortable and make it difficult to see. Discomfort and even disability glare can also be caused by streetlights, parking lot lots, floodlights, some signs, sports field lighting and decorative and/or landscape lights.

Table 15. Five Principles for Responsible Outdoor Lighting

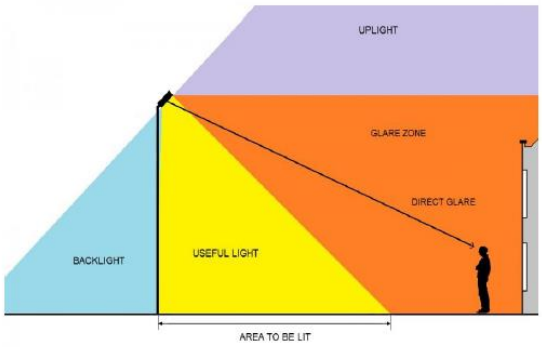
1. Useful	Use light only if needed. All lights should have a clear purpose. Consider how the light will impact the area, including other residents, wildlife and airport users as well as air and ground training activities
2. Targeted	Direct light so it falls only where it's needed. Use shielding and careful aiming to target the direction of the light beam so that it points downward and does not spill beyond where its needed.
3. Low Level	Light should be no brighter than necessary. Use the lowest light level required. Be mindful of surface conditions, as some surfaces may reflect more light into the night sky than intended.
4. Controlled	Use light only when needed. Use controls such as timers or motion detectors to ensure light is available when needed, dimmed when possible, and turned off when not needed.
5. Warm-colored	Use warmer color lights where possible. Limit the amount of shorter wavelength (blue-violet) light to the least amount needed.

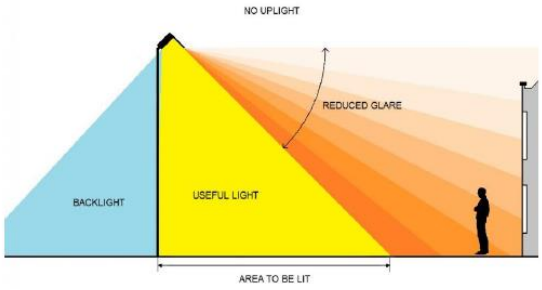
Source: Dark Sky International

Outdoor lighting should utilize downlighting or shielded fixtures that are dark sky compliant. Such fixtures will reduce or eliminate the amount of glare onto neighboring properties, public roadways and also eliminate uplight which can have adverse impacts on pilots, birds and other wildlife navigation as well as trees.



Light pollution is often caused by the way light is emitted from lighting equipment. Choosing proper equipment and carefully mounting and aiming it can make a significant difference.





The diagrams illustrate how fixture orientation and lack of shielding can produce glare, uplighting and upward reflected light which can have impacts on and off-site.

Residential Development considerations:

√ **Building setbacks vs build-to lines** - within Hamlets and Mixed-use areas, setbacks should be set depending on the prevalent pattern in the area, in some cases shallower build-to lines or maximum setbacks that maintain the small historic front yard pattern with larger rear yards should be required to maintain historic residential and business patterns close to the street. In less dense areas where primary buildings are further from the road, larger setbacks can be maintained/required.

√ **Highway frontage development, vs new roads/streets** - strip development should be discouraged where possible, to maintain traffic carrying capacity of arterial and collector streets. Therefore, new streets or local streets should be used for new development where feasible.

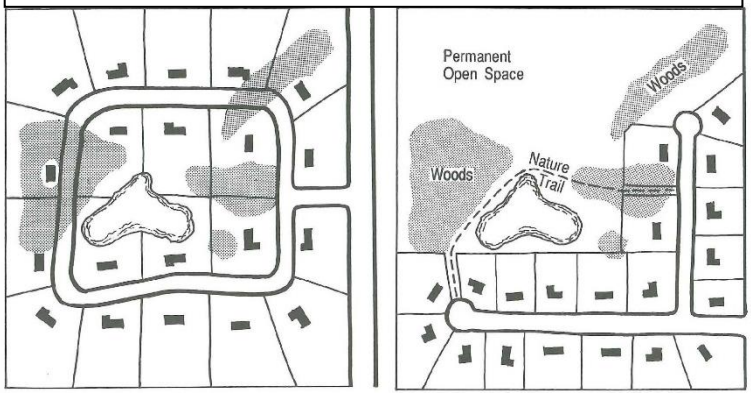
For example, lots that are created one at a time along a main highway can slowly alter the function of the arterial road. As each lot creates a subsequent driveway access, it allows another potential conflict point and reason that traffic must slow down or face either an oncoming automobile or exiting vehicle that may be decelerating or accelerating which ultimately affects traffic flow.

√ **Clustering** – clustering of businesses or homes should be encouraged where feasible to limit strip development and allow open space character and farming activities to be preserved while desired growth occurs.

Placing homes near one another also minimizes the installation and maintenance costs of running roads and utilities to them, allows a better sense of community.

√ **Pedestrian scale or walkable to\from – where feasible,** foster walkable projects that include sidewalks and pedestrian paths, within walking distance from other destinations, and are in scale with Town or Hamlet businesses and residential areas.

Loop Street vs Dead-end Street



For example, pedestrian scale typically balances pedestrian and vehicular needs while providing comfortable environments for people to assemble and associate with others. Community design should be human-scale with services within reasonable distance from one another.

The following walkability standards are recommended: homes within ¼ to ½ mile of most services; elementary schools within ¼ to ½ mile of homes; parks within an eighth to ¼ mile of homes; downtowns should provide a balance of retail and commercial stores and services, e.g., hair salon, hardware store, pharmacy, grocery/deli, restaurants, clothing, post office, library, town\village offices within ¼ to ½ mile of the community center. Areas not being used by pedestrians should be assessed to determine possible reasons for lack of use.

√ **Soil Conditions influencing development patterns** - based on soils on a given project

site, ensure projects address individual septic and drainage issues to limit contamination and off-site impacts.

√ **Dead-end streets vs loop streets** - dead end streets should only be used to access a limited number of homes (less than twenty), after which a second connection should be provided to an arterial or collector road.

For example, if the single access became blocked by an accident or incident and an emergency occurred in a subsequent house further up the single access road, getting to the 2nd emergency could be delayed or even blocked off entirely for a period of time.

√ **Town or Hamlet lot sizes, smaller vs larger** - where feasible, smaller lots should be required to maintain the historic residential and business density with housing and business patterns close to the street to maintain pedestrian scale development.

√ **Cost effective services –** Infill projects should be encouraged where services exist, or where possible, municipal services should be laid out in a compact manner to limit future maintenance costs.

√ **Connections between housing areas** – Residential developments should be connected by internal road to limit trips onto the main traffic artery, also shared driveway accesses are favored over an excessive number of curb cuts. Refer to the curb cut/access management image.

√ **Preserve open space/sensitive lands -** Open space and sensitive lands can be preserved by requiring the project to identify and set aside such areas and allowing smaller house lots in those cases. This improved layout often leads to a more marketable project, with open space areas and trails often that can be shared by the residents.

Conventional Large Lots vs Smaller Lots with Open Space

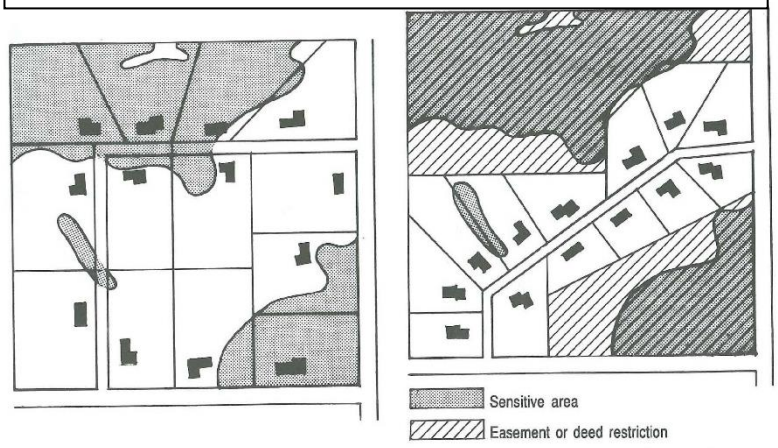


Figure 2–13. Conventional two-acre lot subdivision with homes located on sensitive but buildable land, compared with improved layouts protecting those resource areas, as encouraged by new regulations adopted by the Maine Department of Environmental Protection.

Fort Drum – Wheeler Sack Airport compatibility

- Address tall structures in key areas
- Limit nighttime lighting glare/spillage
- Limit glare produced during daylight
- Noise sensitive uses
- Only Compatible Uses within Airport Protection Zones
- Potential radar compatibility (Air Traffic Control and Montague Weather Station)
- Bird Wildlife Aircraft Strike Hazard (BASH) avoidance

(for more detail, refer to Chapter 6)

Watertown International Airport compatibility

- Address tall structures in key areas
- Limit nighttime bright lighting
- Limit glare produced during daylight
- Noise sensitive uses
- Potential radar compatibility (Air Traffic Control and Montague Weather Station)
- Emergency Helicopter Medivac Land Sites (landing zone tall structure avoidance)

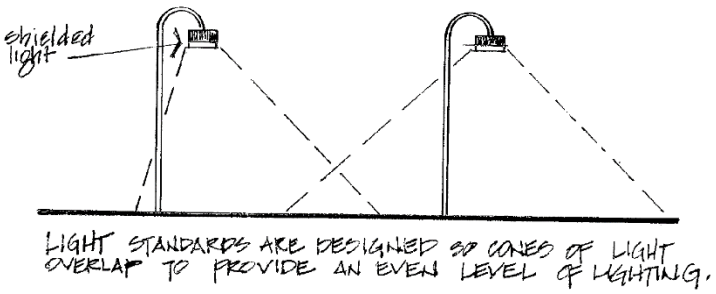
(for more detail, refer to Chapter 6)

Commercial Development considerations:

√ **Connections between parking areas/developments & shared access**, - Already adopted by the Town, developments should be connected by street access or parking lot connectivity to limit trips onto the main traffic artery, also shared driveway accesses are favored over an excessive number of curb cuts.

√ **Lighting** – Lighting should be used where appropriate; however, over-lighting and excess glare should be avoided, especially on neighboring properties and the public roads. Shielded or cutoff lights should be used to minimize lighting spill-over.

For example, lighting should be controlled in both height and intensity to maintain rural character. Light levels at the lot line should not exceed 0.2 foot-candles, measured at ground level. To achieve this, light fixtures should be fully shielded to prevent light shining beyond the lot lines onto neighboring properties or roadways.



√ **Building setbacks** – Maintain current setbacks in business areas utilizing build-to lines.

For example, excessive setbacks often push new buildings away from roads, fostering a contrasting character and anti-pedestrian pattern than historical patterns of development. Build-to lines require buildings to be placed closer to the street, allow parking to the side and rear, and create a pedestrian friendly streetscape.

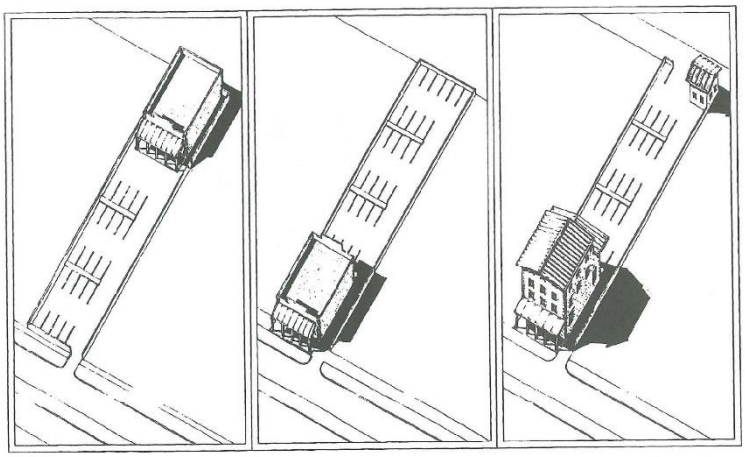


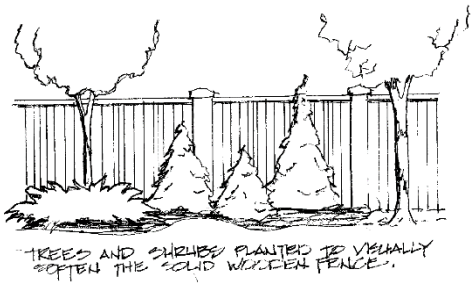
Figure 9–10. Alternative locations for buildings, parking, and access, Davie Settlement, Broward County, Florida. *Source:* Dover et al., 1990.

√ **Infill** refers to the development of vacant parcels within previously built areas. These areas are typically served by public infrastructure, such as transportation, water, wastewater, and other utilities.

√ **Parking to the side or rear** – the bulk of parking areas should be smaller, distinct areas to the side or rear to allow closer building placement to the road in order to maintain community character, reinforce the visual presence of building as opposed to

parked vehicles and the pattern of buildings along the roadside.

√ **Landscaping** – appropriate landscaped buffering should be used to soften parking area edges and buildings, including screening views between uses where needed and partially screen views of parking areas from public roads.



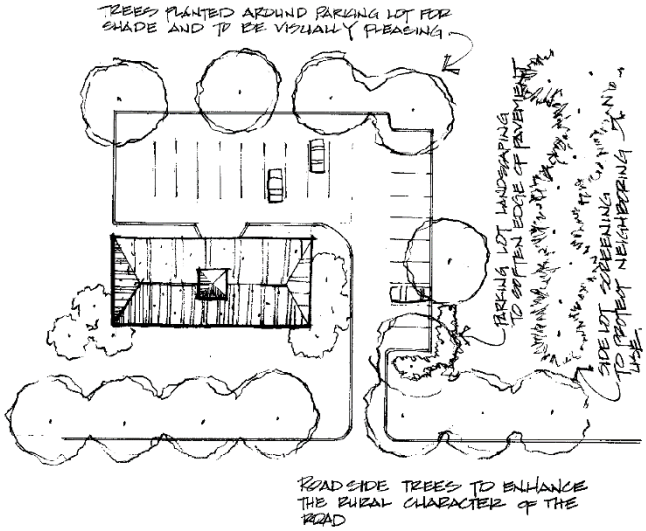
√ **Mixed use development** – mixed use developments should be considered where feasible to include the historic pattern of services\employment centers with residences above or nearby, to allow enhanced pedestrian opportunities and decrease traffic congestion.

√ **Pedestrian scale or walkable to\from –** Within hamlet or suburban areas, foster walkable projects with buildings near the street that include sidewalks or pedestrian paths, are within walking distance from other destinations, and are in scale with other businesses and residences. See above description of pedestrian scale in the overall considerations.

√ **Business hours of operation -** for offices or businesses locating near or within primarily residential areas, consider compatible hours of operation (including hours that parking area lights are used).

√ **Maximum building heights –** consider building heights compatible with current Village business and residential buildings to maintain historic patterns and community character.

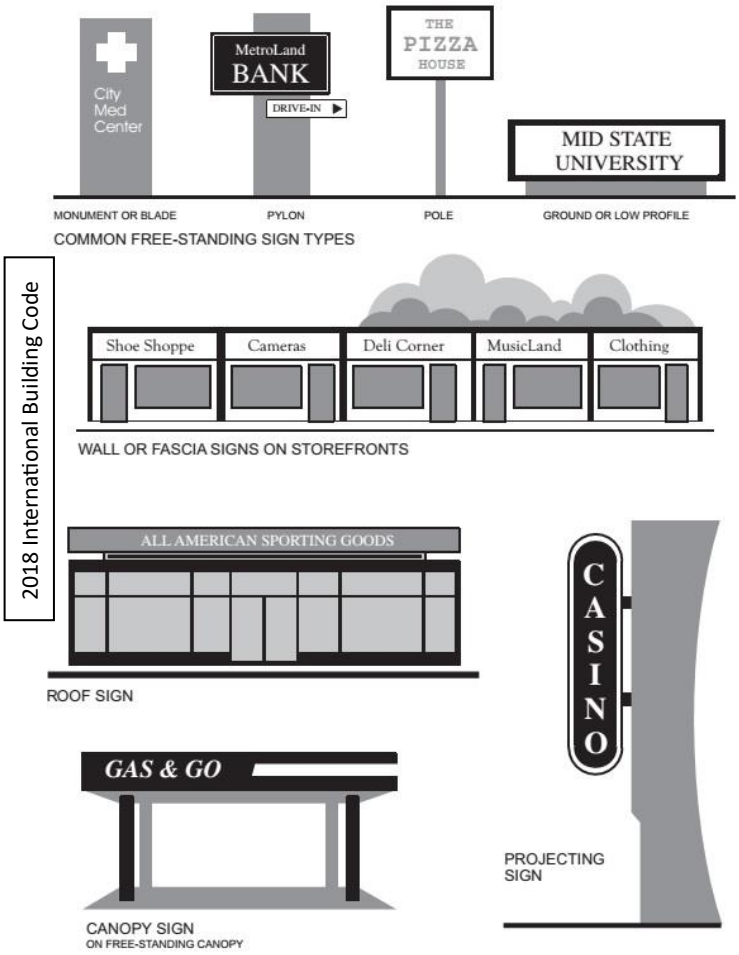
Side and Rear Parking - Preferred



√ **Signage** – Where appropriate, adequately sized signs should be used (consider letter size and total sign size based upon the speed limit), with a total size allowable limit to ensure efficient signage. Within hamlet areas especially with slower speed limit zones, smaller, lower, and externally lit signs should be used. Free standing signs should consider lower monument style. Glare from all signage should be minimized.

For example, Saratoga Springs, New York, regulates freestanding signage based on speed limit: downtown area is limited to 12 feet in height, 12 square feet in area; other districts within areas of slower speeds such as those 44 mph and less, 12 feet in height and 24 square feet; district areas with speed limits of 45 mph or

greater, 20 feet in height and 40 square feet in size.



2018 International Building Code

Sign Regulations- Purpose

By their nature, signs and billboards are intended to attract attention, including vehicle drivers. The effects of signs and billboards on safety, particularly the safety of drivers, passengers, pedestrians and cyclists as well as the effects of these signs on nearby residents and businesses, are valid reasons for controlling their location and size. In addition to safety, public welfare and community character are also valid reasons for regulating signs. Municipalities can regulate signs visible to the public through its zoning regulations, using reasonable and objective standards that protect the public's health, safety, welfare and community character.

Electronic Message Center Signs

Digital and/or electronic message center signs, with the ability to display movement often, can potentially affect public safety, welfare and community character to a greater extent than other types of signs. Digital signs and EMCs can display words, symbols, figures or images that can be electronically changed by remote or automatic means and are distinct from conventional "manual change copy" signs that do not change their message except through physical replacement.

Digital signs and EMCs have advantages over conventional manual-change copy signs because the LEDs have a longer service life, do not require on-site labor to display a new message, and offer multiple messages within the same sign area. Many advertisements can be sold using the same physical space. Key concerns are their daytime and nighttime brightness, their change frequency or dwell time, whether moving images may be permitted, among others.

Zoning Consistency with the Plan

The function of land regulation (zoning) is to implement a plan for the potential future development of the community. Its exercise is constitutional only if the restrictions are necessary to protect the public health, safety, or welfare and is in accordance with an adopted comprehensive plan. The requirement of a comprehensive or well-considered plan not only ensures that local authorities act for the benefit of the community but protects individuals from arbitrary restrictions on the use of their land.

TOWN PUBLIC INPUT PRIORITIES

During the planning process, Town officials conducted a community survey, a planning issue/brainstorming open house, and hosted a vision, goals and strategies open house to garner additional public opinion regarding the land use direction the Town may desire

for current and future land use development.