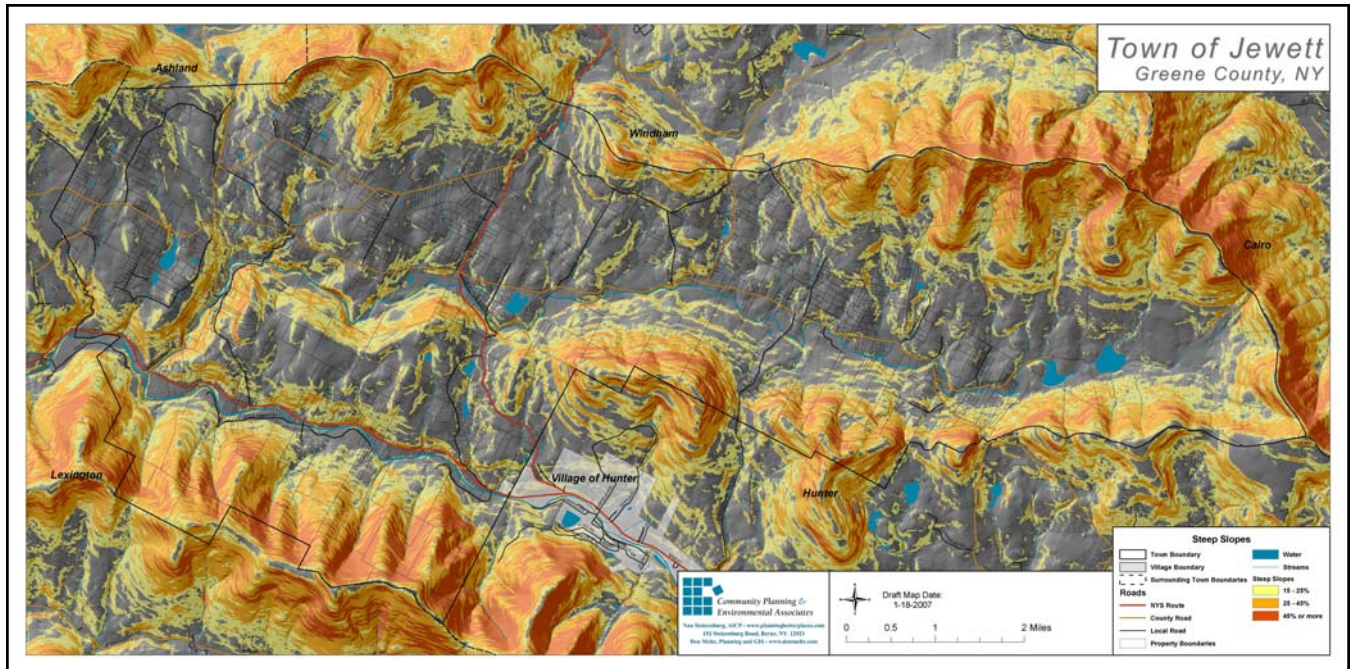


Town of Jewett Comprehensive Plan



October 2007

Town of Jewett Comprehensive Plan



Table of Contents

I. Acknowledgements.....	2
II. Introduction.....	3
Summary of Issues and Opportunities.....	5
III. Vision Statements	8
IV. Goal Statements	9
Comparison with previous goals	10
V. Recommended strategies and actions to attain vision and goals	11
I. Strategies Related to Rural Character	11
II. Strategies Related to Future Housing	15
III. Strategies Related to Small Business Development	17
IV. Strategies Related to Infrastructure	17
V. Strategies Related to Environmental Protection and Open Space	18
VI. Strategies to Protect Scenic Resources.....	21
VII. Strategies to Protect Open Spaces.....	22
VIII. Strategies Related to Agriculture.....	23
IX. Strategies Related to Local Government, Community-Building, and Community Services.....	24
X. Strategies to Enhance Administration and Effectiveness of Local Laws	26
VI. ACTION PLAN AND IMPLEMENTATION PRIORITIES.....	31
VII. MAPS	38

APPENDICES (FOUND IN SEPARATE VOLUME)

APPENDIX A: PROFILE AND INVENTORY OF RESOURCES

APPENDIX B: PUBLIC INPUT

APPENDIX C. WATERSHED CONCEPTS

APPENDIX D. CONSERVATION SUBDIVISIONS

APPENDIX E. GROUNDWATER STUDY

APPENDIX F: INFORMATION ON WIRELESS NETWORKS

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II. Introduction

A comprehensive plan is a written document that identifies the goals, objectives, principles, guidelines, policies, standards, and strategies for the growth and development of the community. It is not a law in itself, but New York statutes require that all land use laws in a municipality be consistent with a comprehensive plan. The Town of Jewett is authorized to develop and adopt a comprehensive plan by New York State Town Law Section 272-a.

New York State considers adoption of a comprehensive plan to be a critical tool to promote the health, safety and general welfare of the people of the Town and to consider the needs of the residents. A comprehensive plan is the policy foundation upon which communities are built. It is a roadmap for future decision making.

Once a comprehensive plan is adopted, there are several implications:

- 1) All government agencies involved in planning capital projects in Jewett must consider this plan before they start any capital project. That means the Town now has a much larger stake in what other governmental agencies want to do when they are proposing a project in Jewett.
- 2) Community consensus and support can be built on the shared vision, goals, and strategies presented in the plan.
- 3) Programs and regulations may be adopted to implement the plan to protect the Town's resources and to manage desired development and growth.
- 4) Comprehensive plans can assist in obtaining grants.
- 5) This plan is the basis for regulatory programs. All land use laws are required to be consistent and in accordance with this plan.

This Comprehensive Plan is an update of two previous planning efforts in Jewett: a 1976 Plan prepared by Greene County Planning as part of a full-county planning effort and a 1990 Plan prepared by the Town of Jewett Planning Board. This Comprehensive Plan incorporates information from those plans and updates it with new information, public input, and planning strategies.

The issues, goals and recommended strategies detailed in this comprehensive plan are based upon studies of information and data gathered about the Town, as well as from the input of many Town residents. Starting in October of 2006, the Town of Jewett implemented a comprehensive effort to involve the public in development of this plan. A Comprehensive Plan Steering Committee was appointed by the Town Board to oversee this effort. This Committee used a 2004 resident survey along with a planning and visioning workshop to understand public sentiments and desires for Jewett's future. The public outreach assisted the Committee in identifying key issues to be addressed in the plan. All public information collected can be found in Appendix B.

Town of Jewett Comprehensive Plan October 2007

While public input was being collected, other studies and analyses were also being conducted including background studies on land use; demographic and population characteristics; housing and community facilities; transportation; recreation and educational resources; public safety programs; environmental conditions: groundwater, and analysis of the growth patterns and trends that have affected, and will continue to affect the Town's growth.

Specific sources of information used to prepare this plan included:

- ✓ The Town of Jewett Comprehensive Plan (1976)
- ✓ The Revised Town of Jewett Comprehensive Plan (1990)
- ✓ A resident questionnaire (2004)
- ✓ A community visioning workshop
- ✓ Interviews of town officials to identify issues
- ✓ Greene County Staff and Plans
- ✓ Geographic Information System (GIS) Data for Mapping and Analysis

This Comprehensive Plan attempts to answer several questions for Jewett:

- 1) *Where are we now and where are we going?* The profile and public input sections (found in Appendix A and B) answer the “where are we now?” and “where are we going?” questions. These sections describe current conditions, demographics, physical and cultural features, and information from the residents.
- 2) *Where do we want to be?* The Vision statement sets the tone and overall direction the Town should take in the future. It was developed directly from the survey and planning workshop, and other public comments received. The goals included in this plan are broad statements that reflect “ideal” future conditions desired by the community. The goals offer more specific direction and are consistent with the stated vision of the town.
- 3) *How can we get there?* This is answered by a series of recommendations or action steps that the Town can take to accomplish each goal contained in this plan. When put into action, these strategies will help Jewett attain its vision.

This comprehensive plan is not a local law. The recommendations made in this Comprehensive Plan will not take effect until the Town Board decides to do so. This Comprehensive Plan will be implemented through local laws and programs over time. Each time a local law is amended or developed, public hearing(s), review by the county planning board, and an environmental review will be necessary.

Jewett should use the plan to prioritize the strategies and actions so that they can direct implementation efforts and review progress on an annual basis. The whole plan should be reviewed and updated by the Town Board or a special “Ad-Hoc” committee every five years.

Summary of Issues and Opportunities

A critical exercise in the comprehensive planning process is the identification of the strengths, weaknesses, opportunities and threats (SWOT) facing the Town. The SWOT analysis becomes an important basis for development of goals and future strategies. The following SWOT was developed from public input (survey and planning workshop), analysis of data (Town Profile and Inventory), evaluation of physical features (GIS database, maps and build-out analysis), and input from the Comprehensive Planning Committee. Some of these conclusions appear to be contradictory because people who responded had contradictory opinions.

Strengths are those accessible and valuable assets that should be preserved or enhanced.

Weaknesses are drawbacks or short-term challenges that the Town faces which need to be addressed so that they do not cause long-term problems or threats to the viability of either the quality of life or the economy of the area.

Opportunities are the long-range positive trends affecting the Town as well as the positive paths that might follow. The Comprehensive planning process is designed to identify opportunities that offer Jewett a set of realistic, tangible and affordable actions for the community to pursue.

Threats are long-term weaknesses that can undermine attempts to meeting the goals established by Jewett. Threats are trends or actions that if left unchecked, might do irreversible damage to the town.

(The following are not in priority order)

Strengths

- Beauty and rural character which include:
 - Mountains and scenic views
 - Fresh air and water
 - Forests and Wildlife
 - Quietness
 - Cleanliness
 - Low population density and lack of large commercial development
 - Friendliness

- Planning and zoning
- Low crime
- Privacy
- Reasonable taxes
- Recreational opportunities including
 - Trails
 - Sports

Town of Jewett Comprehensive Plan October 2007

Outdoor recreation activities with nearby ski areas

- Responsive Town government which includes
 - Town website
 - Roads/road maintenance and snow removal
- Central to metropolitan areas
- Residents place a high value on the environment and environmental sustainability including water quality, forests, scenic views and open spaces
- Lack of traffic congestion
- Farms
- Open lands
- Churches
- Emergency services available
- Highly skilled residents
- Growing involvement of second home owners in the community
- Nearby cultural activities

Weaknesses

- High taxes
- Poorly maintained properties including derelict houses and junk cars
- Litter
- Lack of nearby shopping
- Lack of available labor
- Burning of garbage
- Limited educational opportunities
- Lack of regulations regarding timber harvesting
- Lack of gathering places for children and limited community facilities
- Moderate to low levels of community involvement
- Lack of governmental communication
- High concentrations of second homes remain vacant for long periods of time.
- Limited access to health care
- Limited access to telecommunication services
- Few young people
- High cost of housing
- Potential conflict between primary and secondary homeowners
- No consistent way to tap into the skills of residents
- Lack of public transportation
- Emergency response time can be considerable

Opportunities

- Existing Catskills tourism base
- Public support for managing development to preserve the character and environment of Jewett
- Promote cooperative efforts to solve regional problems

Town of Jewett Comprehensive Plan October 2007

- Jewett has a regulatory process in place that can be amended to meet future needs
- Town has background of success with grant writing and management and this success can be built upon
- Town has website and newsletter as mechanisms to communicate with residents
- Involvement of the Greene County Soil and Water Conservation District with its stream corridor and watershed management studies of the Schoharie and East Kill creeks.

Threats

- Lack of control over logging
- Ridgeline development that alters character
- Additional development that erodes rural character
- Potential loss of volunteer fire and rescue
- Rising land prices
- High energy costs
- New York State Department of Environmental Conservation (DEC) and New York City Department of Environmental Protection (DEP) control large portions of Town leaving large tracts of land outside of Town purview
- Potential development of Casino in area
- Deterioration or perceived deterioration of school system
- Proximity to New York City and its hyper-growth and other growth in the Hudson Valley.

How does this compare to public sentiment from past planning efforts? Many strengths, weaknesses, opportunities and threats are the same. There are however, several that are different. For instance, in 1990, bad roads were considered to be a serious problem and now people feel differently. The survey conducted for the 1990 listed overdevelopment, lack of zoning, over-population, taxes, environmental deterioration, problems with water, dumpsite location, garbage disposal, and poverty and unemployment as some of the most serious issues. Overall, there are many similarities in sentiment between 1990 and now.

III. Vision Statements (not in any order of emphasis)

In the future, the Town of Jewett will have...

- A rural, small town character.
- A clean, healthy and sustainable natural environment.
- Good roads.
- An open, responsive, and competent town government.
- Small businesses consistent with the rural character of Jewett.
- A diversity of housing available to all income levels and ages.
- A friendly, neighborly community with high community involvement and spirit.
- An engaged community with a high level of civic pride.
- A mix of ages and income levels as residents.
- Quality public services and amenities.
- A community that integrates primary and secondary homeowners.
- A small but active agricultural base that contributes to the economy, environment and character of Jewett.

More specifically, in the future, the Town of Jewett will...

- Retain its charming, rural and natural beauty and visual appeal. Jewett will continue to be known as having a clean environment containing pristine forests and streams, healthy trees, clean air, wildlife, active agricultural areas, ridges and mountaintops that remain pristine, and unimpaired scenic views.
- Control development to maintain a small town feeling. Jewett will remain a residential community with mainly but not exclusively low-density housing. Our diverse housing stock is small scale, visually pleasing, and consistent with our rural nature.
- Have modern technological conveniences which enhance the quality of life for all and allow for the development of small businesses and home occupations.
- Maintain an open and responsive government where all citizens are made to feel welcome and are encouraged to participate.

Town of Jewett Comprehensive Plan October 2007

How does this vision compare to that established in past planning efforts? In both the 1976 and 1990 plans, the residents and landowners of Jewett expressed many of the same sentiments, hopes, and desires for Jewett. In 1976, the long term direction was to emphasize hamlets, provide for growth that is directed and guided, retain agricultural land, provide for economic development, conserve the natural environment, and protect the rural character. Similarly, in 1990, residents indicated that they wanted Jewett to remain rural, control growth, maintain environmental quality, increase recreation development, and attract young families. Based on an analysis of both the 1976 and 1990 plans, there has been little change in the long term vision and direction for Jewett.

IV. Goal Statements

Within a Comprehensive Plan, a goal is an intended outcome that requires action by the community that satisfies the needs of its citizens. The following updated goals (not in any order of priority or importance), when implemented will help Jewett attain its long-term vision:

- Goal 1: Rural and small town character is maintained.
- Goal 2: Jewett maintains a clean and healthy natural environment.
- Goal 3: Agricultural activities and farmlands are maintained and encouraged.
- Goal 3: Roads are safe, free of traffic congestion, and remain an important part of the rural aesthetic character of Jewett.
- Goal 4: Telecommunication services and facilities are available for personal and business uses.
- Goal 5: Town government is responsive, open, and stable to provide efficient and effective local public services and amenities.
- Goal 6: Businesses operate in an unobtrusive manner consistent with the character and needs of Jewett.
- Goal 7: Housing opportunities are diverse and available to many income levels and ages.
- Goal 8: Outdoor recreational facilities and opportunities are available.
- Goal 9: Jewett is a friendly, neighborly community with high community involvement and spirit.
- Goal 10: Accommodate our aging population.
- Goal 11: Create opportunities for a younger population.

Town of Jewett Comprehensive Plan October 2007

Goal 12: There is an increased convergence of interests between primary and secondary homeowners in Jewett.

Comparison with previous goals

How do these goals compare with those established in past plans? The 1976 plan did not establish specific goals such as those stated above. The 1990 plan however, established nine goals (in bold) that remain consistent with the desires of current residents. These existing goals are as follows:

1. Protect the rural character and the social and economic stability of Jewett. This was to be implemented largely by open space preservation and concentrating future growth in areas where development already exists.

2. Emphasize hamlet areas to maintain the rural character, provide for balanced growth, and provide a community focal point.

3. Expand in proximity of hamlets. This policy suggested that existing hamlets be strengthened by establishing large zoning districts around these areas to give them room to grow.

4. To guide the future growth and minimize conflicts among the uses of land and buildings. This goal set the stage for zoning.

5. Preserve the natural environment and rural character of Jewett while providing for maximum public benefit from environmental resources. This goal implies prevention of future sources of pollution and overdevelopment of rural areas.

6. Preserve agricultural lands.

7. Promote the preservation of historic sites. This was to be accomplished through establishing historic districts and designation of historic structures.

8. Provide a transportation system which will enhance the movement of people and goods with a minimum of conflicts and with maximum safety.

9. Provide for a variety of housing types, living choices and locations, as well as the opportunity for every citizen to live in decent housing within their ability to pay. This goal recognizes that housing is a critical need for people of all types of backgrounds and incomes.

The goals established in this plan build on these same sentiments. In addition, other issues such as the need for telecommunications are new issues that need to be addressed. The current zoning in Jewett came largely from these earlier planning efforts. This

current Plan update gives Jewett the opportunity to evaluate the effectiveness of past strategies and set new directions as needed.

V. Recommended strategies and actions to attain vision and goals

In order to meet the stated vision and goals of this Comprehensive Plan, the Town of Jewett can implement the following actions, programs, and policies.

I. Strategies Related to Rural Character

A. Zoning, subdivision and site plan regulations should give authority to the Planning Board to review and plan rural character.

For example, some of these standards could be:

1. Evaluate each site to determine suitability of building locations in relation to important features that should be protected such as ridgelines, tree lines, hedgerows, streams, and wetlands.
2. Establish design review for commercial development that regulates building mass and proportion, roof pitch, windows, site layout, and the relationship of buildings to one another and to the roadway.
3. Require standards that minimize removal of vegetation, and grading and location standards of driveways along steep slopes and ridgelines.

B. Encourage residential and commercial development in hamlets built to be consistent with those traditional development patterns. Small business growth in the hamlets serving residents will be particularly important.

1. Adopt hamlet style design standards so that setbacks, lot size, building height, road frontages, etc. match existing patterns for each specific hamlet.
2. Consider restricting commercial building footprints in the hamlet to ensure that commercial development is consistent with the scale of the hamlet and Town.
3. Continue to maintain the hamlet areas as mixed use areas with non-residential uses requiring a special use permit. However, amend zoning to include special use permit requirements specifying that new commercial uses would

Town of Jewett Comprehensive Plan October 2007

need to be buffered from adjacent residential uses through screening, fences, carefully sited lighting, and parking lots, etc.

4. Consider amending zoning boundaries of hamlets so there is “room to grow” and to ensure that new growth is consistent with rural hamlet styles found in Jewett.

C. Encourage residential development in rural areas to be consistent with rural character.

1. Encourage traditional and rural road styles.
2. Subdivision regulations should include development standards for rural siting to prevent “cookie-cutter uniform subdivisions”, protect flood areas and watersheds, and control ridgeline development.
3. Re-evaluate the uses allowed by special permit in the zoning for the RR and RC districts. The purpose statements for the RR and RC districts do not match with the intended list of specially permitted uses. The purposes for these districts are to preserve the rural character of the Town while maintaining open space and agriculture and to have low density due to physical limitations. Yet zoning allows motels, resorts, offices, restaurants, mines, golf course, and several other similarly intensive uses. Disallow special uses and other uses which would be inconsistent with rural character or would create a negative impact on the environment including but not restricted to those uses which would be incompatible with the existing rural conditions related to visual, noise, or light.
4. Add commercial development standards in zoning and site plan review particularly related to storm water runoff, lighting, lot layout, and building design. Amend the parking lot section in zoning to include provisions and standards for lighting, location of parking lots, access, and landscaping. These important features are currently not included.
5. Target retail and higher intensity uses to be located in hamlets.

D. It is important to prohibit county and state roads from development in a “strip” fashion. Avoid commercial development along major roads.

E. Site plan review should have language in it to authorize the planning board to review building design for commercial buildings and to set standards and expectations for site layout and design consistent with the historical and rural character of the Town. Large scale buildings (big box stores, structures over 35’ in height, or buildings with large square footage of floor space) are not desired and should be considered not compatible with the rural character of Jewett. Outside the hamlet, small scale businesses permitted through the special use process are preferred.

Town of Jewett Comprehensive Plan October 2007

F. Adopt an adult use law in Jewett.

G. Evaluate boundaries of zoning districts with topography and other environmental conditions and amend or adjust boundaries as needed to have a better match with the purposes of the districts.

H. Update subdivision, zoning and site plan review laws to include historic resources as important features to be protected.

I. Develop environmental performance standards in zoning to establish standards to control the intensity of land use to ensure that new development is consistent with the environmental, open space, and rural character goals of the Town.

1. Consider using impervious surface and open space performance standards in zoning as follows.
 - a. Hamlet:
Impervious surface standard: 30%
 - b. Rural Residential:
Impervious surface standard: 20%
Open Space standard: 50%
 - c. Rural Conservation:
Impervious surface standard: 10%
Open Space standard: 60%
 - d. Conservation:
Impervious surface standard: 10%
Open Space standard: 80%

J. Jewett already allows use of clustering. However, Jewett's provision can be strengthened as follows:

1. It is recommended that the zoning law clearly define and specify the type of open space desired to be protected, and the minimum amount of open space which shall be preserved.¹
2. Add provisions for use of conservation subdivision design. (See Appendix D)
3. Ensure that the zoning section on clustering and conservation subdivisions are consistent with Section 278 of New York State Town Law.

¹ Both clustering and conservation subdivision techniques allow a relaxation of lot size, setback, road frontage, and other requirements in order to allow flexible and innovative lot layouts that preserve open space and important environmental or cultural features on a site.

Town of Jewett Comprehensive Plan October 2007

4. Reconsider how clustered or conservation subdivisions are applied. These techniques can be applied through one or more of the following ways:
 - a. Both clustering and conservation subdivisions could be allowed on a voluntarily basis as currently established in the Zoning. They can be further encouraged by offering incentives to applicants such as density bonuses.²
 - b. There may be circumstances when these design techniques should be applied for protection of critical resources. The Planning Board should be given authority to require these techniques under certain conditions. The law should outline under what conditions the Planning Board can require this for recommended situations where clustering/conservation subdivisions should be required).
 - c. Establishing mandatory use of clustering.

K. Future steps should be taken to amend zoning to reduce the overall and long-term growth potential of the Town. Zoning should consider critical environmental conditions such as steep slopes over 25%, wetlands, or proximity to water as building limitations that influence a parcels' development potential. Explore alternative methods of controlling growth such as by calculating development potential on a given parcel based on "net buildable acreage" or other similar techniques.

L. Recommended Environmental Performance Standards:

1. No new structures should be constructed within any mapped floodplain unless they are agricultural.
2. On lands with slopes 15% to 25%, no more than 30% of the area in steep slopes should be re-graded or stripped of vegetation.
3. On lands with slopes in excess of 25%, no more than 15% of the parcel should be re-graded or stripped of vegetation.
4. Place a 100' buffer on all State regulated wetlands and a 40' buffer around all federally regulated wetlands.
5. For any shoreline of a lake, there should be no more than 15% of each parcel as impervious surfaces.

M. Consider creating a new zoning district to encompass all State and City owned lands. Most of these lands have many very sensitive environmental features and are not

² A density bonus (pursuant to New York State Town Law 261-b) is a form of incentive zoning where an incentive of increasing the density or waivers of height, setback, use, or area provisions of the zoning law are waived in exchange for something that benefits the town (such as affordable housing, open space, recreational facilities, infrastructures, etc.)

appropriate for future development should these lands be sold to private landowners. Have a very low density in this district. Consider a density standard of 1 dwelling per 30 acres, with a maximum building envelope of 2 acres. (A building envelope is the area within a parcel that contains all the disturbed areas including a house, sidewalk, driveway, yard, septic system, and accessory buildings. In conservation areas these should be limited to a specific size in order to protect the critical resources.)

II. Strategies Related to Future Housing

A. Maintain current zoning that directs higher density housing options such as multi-family dwellings to the hamlet areas.

1. This is appropriate in hamlets where
 - a. higher density exists;
 - b. there is a better chance of future provision of public infrastructure;
 - c. retail establishments could be established to serve a higher density of residents.

B. Create moderately-priced housing conditions in Town by implementing the following programs³:

³ In order to accomplish this, the Town will need to assess housing needs, understand the market, foster collaboration with other agencies such as the Columbia Partnership, proactively plan for future growth, build support for programs that support affordability, insist on excellent design, and promote a mix of incomes in Town. Assistance from experts in housing and affordable housing may be needed to develop this program. There are six principal options Jewett can consider to increase the availability of affordable and moderately-priced homes. These include:

- a. Reduce red tape and regulatory barriers to affordable homes. Zoning policies should continue to support a diversity of housing types.
- b. When the housing market is strong, capitalize on it to expand the supply of affordable homes by tapping the increased tax revenues associated with increases in property values, using tax increment financing, create a housing trust fund, or use inclusionary zoning (See I, below).
- c. Generate additional capital for affordable homes such as leveraging additional federal funds through the low-income housing tax credit program or equity sharing.
- d. Expand home ownership education and empower residents to purchase and retain private homes.
- e. Participate in programs such as first-time home-buyer programs.
- f. Expand the availability of sites for moderately-priced houses through programs such as facilitating the reuse of vacant, abandoned or tax-delinquent properties, rezoning to make more land available in the hamlets (or new hamlets) that would allow smaller lot sizes and increased density, or make publicly owned land available for affordable homes. Partner with regional non-profit housing organizations to develop and optimize opportunities for affordable housing.

Town of Jewett Comprehensive Plan October 2007

1. Allow higher density housing in the hamlet areas on small lots consistent with hamlet design and traditional patterns.
2. Ensure that the zoning use table allows for a variety of multi-family housing types permitted through a special use permit review in the hamlets.
3. Provide for cluster development and conservation subdivision design in order to create more affordable lots and reduce development costs in other areas of Town.
4. The Town should develop a comprehensive housing strategy for working families.⁴

C. Encourage the development of senior housing opportunities in the Town.

Development is recommended in areas adjacent to resources and services that can easily be accessed by senior adults. This housing should include both affordable units as well as market-rate units, to allow existing residents to downsize. Further market analysis should be conducted to identify other appropriate uses, including assisted living facilities or cooperative housing development. Density bonuses in areas suitable for senior housing can be used for encouragement.

D. Consider use of inclusionary zoning. This should be applied only to large developments.⁵

Other Strategies should be to seek grants to build homeownership opportunities for Town residents; to assist homeowners with rehabilitation of older or sub-standard homes, and to help residents and Town officials understand various state and federal programs that already exist to assist in providing affordable homes such as the tax abatement program on lots that are part of an affordable housing program.

⁴ Create a density bonus incentive (pursuant to New York State Town Law 261-b) when moderately-priced units are dedicated and established in a subdivision. Jewett may want to consider offering this density bonus only for major subdivisions.

⁵ Inclusionary zoning is a mandatory requirement that certain large developments provide a certain number of units built as dedicated for moderately-priced units. These programs generally try to attain workforce housing which is defined as housing which when purchased shall use no more than 30% of the home buyer's family income for principal, interest, taxes and insurance as determined by US Department of Housing and Urban Development median income for Greene County. For example, if median income is determined to be \$50,000 a workforce housing unit would cost the family no more than \$15,000 in principal, interest, taxes and insurance annually (\$1,250 per month). Any inclusionary zoning enacted by the Town of Jewett must incorporate methods to extend the affordability period indefinitely, while still ensuring opportunities for individual asset growth. Inclusionary zoning could also include incentives or offsets to compensate property owners for revenue foregone by producing homes at below-market prices.

III. Strategies Related to Small Business Development

A. Encourage development of broadband and other telecommunications facilities for personal, business, and home occupation uses. See Appendix F for additional details.

B. Encourage home based and other small businesses that are consistent with the rural nature of the Town and that utilize adaptive re-use of existing structures. Make a distinction in zoning between low impact home occupations and major home occupations. Low impact home occupations are those that have no need for clients or customers to enter the premises, parking, outdoor storage, or signage. These kinds of home occupations should be permitted by right without need for a permit. Major home occupations are those that have customers or clients, along with parking, lighting, signage, and other features that make it obvious a business is being conducted on the premises. These types of home occupations should be required to be permitted as a special use with site plan review.

IV. Strategies Related to Infrastructure

A. There are innovative ways to handle waste water treatment should it become necessary in the future. The Town of Jewett should explore all management and technical options to handle waste treatment in the hamlets. These include use of biological systems, small package plants, and management systems of on-site septic.⁶

B. In order to control traffic along State and County routes as development continues, amend zoning and site plan review laws to institute traffic access management techniques for commercial developments and major subdivisions. The purpose is to reduce the number of curb cuts and slow traffic.⁷

C. Ensure that adopted local highway standards incorporate and allow use of appropriate traffic calming techniques so that they are available if needed for a large scale project.

⁶ Decentralized systems maintain use of private on-site septic systems but set up a district to manage the functioning and treatment of waste water from individual homes or businesses. Management systems can range from a system-wide inventory and awareness of maintenance needs in the hamlets, management of septic systems through maintenance contracts with landowners, management through operating permits, utility operation and maintenance, or utility ownership and management. Often small communities will establish a "sewer" type-district where residents in the district pay into the system and the Town administers inspection, pumping, maintenance, and replacement of failed septic systems. According to the US EPA, "adequately managed decentralized wastewater systems are a cost-effective and long-term option for meeting public health and water quality goals, particularly in less densely populated areas" (EPA 832-R-97-001b). This can be a viable and cost-effective solution for waste treatment in the hamlets of Jewett, compared with installation of central sewers.

⁷ (Access management includes such techniques as shared access drives, shared parking lots, reduction of curb cuts, use of frontage roads, etc.)

Town of Jewett Comprehensive Plan October 2007

D. Maintain existing rural road standards as outlined in local law as they provide for new roads consistent with rural character. Do not allow new roads to be over-built and thus, out of character in Jewett. Maintain State and County roads as two-lane rural highways (with minimized number of curb cuts, no traffic lights, and without excessive paved areas and right-of-ways.)

E. Maintain a Capital Improvement Plan that includes a section for the highway department and road maintenance and expand the plan to cover other future capital needs.⁸

F. Consider and plan for accessibility needs of emergency vehicles in the subdivision process.

G. Over time as development occurs in hamlets, work to create new pedestrian opportunities in hamlets – keep new roads narrow to preserve small-scale hamlet character and promote use by pedestrians with paths.

H. Maintain training for highway crew members by participating in programs such as the Cornell Local Roads Program.

I. Work with Greene County to increase the availability of county-sponsored transportation for residents, especially for senior citizens, to provide access to shopping areas and health care facilities.

J. Plan long-term for the more efficient use of our volunteer fire departments and prepare for a possible transition from a volunteer to paid emergency service providers.

K. Consider developing a plan for an environmentally efficient and friendly management of solid waste.

V. Strategies Related to Environmental Protection and Open Space

A. Implement the recommendations contained in the Town of Jewett Groundwater Study (See Appendix D for the full report). These recommendations include:

1. Due to the variability of well yields within Jewett, it is recommended that the Town adopt a requirement that any lots created through the subdivision process that are less than 5 acres in size should prove that an adequate water supply exists

⁸ A Capital Improvement Plan shows the proposed expansion, upgrading, maintenance and financing of all capital improvements and infrastructure projects. A CIP plans for the location, expense and timing of major purchase, construction and repair. It allows better financial management and more careful locating of growth. In this way, a paving program can be initiated and funded over time.

Town of Jewett Comprehensive Plan October 2007

before subdivision approval. Otherwise, consider a 5 acre minimum lot size if a well is not drilled prior to subdivision approval.

2. It is also recommended that the Town adopt a policy that more extensive hydrogeologic testing be required in areas of high-density or large water-use development. The hydrogeologic testing requirements should be determined on a case-by-case basis and should consider the size (acreage), number of wells, anticipated average daily water demand, daily variation in water demand, water quality requirements, and the geologic and hydrogeologic setting of the project where well spacing and lot sizes may need to be adjusted.

B. All subdivision reviews should add emphasis to the importance of protecting important environmental features during development such as steep slopes, ridgelines and wetlands. Consider authorizing the Planning Board to review and approve the location on the newly created parcel(s) of the area allowed to be disturbed for driveways, buildings and septic systems.

C. Jewett allows earth, stone and gravel mines as special uses in all areas except hamlets. It is recommended that a new section on mining be added to the zoning. Although the New York State Department of Environmental Conservation has a mining permit program for certain mines, it is recommended that Jewett amend zoning to review and regulate mines not covered by DEC. It is also important to have local controls and mining development standards in site plan review for DEC permitted mines as allowed for by state law.

D. Institute Best Management Practices to reduce erosion, sedimentation, and surface water runoff. The Town should institute requirements and standards to control runoff more effectively. Use of best management practices for water management after road construction, and maintenance of ditches is important.

1. Apply watershed protection methods including, but not limited to the following:
 - a. Zoning law should incorporate new standards for “low impact development”.⁹
 - b. Propose ways to maximize recharge with minimal water fluctuations during and after development. The Planning Board should be authorized to ask for and review pre- and post development runoff calculations to understand and minimize potential changes on major subdivisions.

⁹ These are especially relevant to development in rural areas and rely on bioretention or rain gardens, use of soil amendments, grassed swales, use of rain barrels, permeable pavers and minimizing impervious surfaces. Include low impact development practices including stormwater best management practices. (See Appendix C for more information on low impact development.)

Town of Jewett Comprehensive Plan October 2007

- c. Include monitoring and management when necessary by a responsible on-site erosion and sediment control specialist.
 - d. Incorporate the short-term planting and long-term restoration and maintenance of vegetation on any re-graded slopes. Preserve as many mature trees as possible. A detailed restoration and maintenance plan should be a condition of, and incorporated into the Planning Board's site plan approval. The design of any landscaping plan should be to prevent erosion, maintain biodiversity, water management, and screening to preserve the character of the subwatershed. The plan should include details on both ground cover and shrub/tree vegetation (a plant list) and should cover short term-planting and long-term management of the vegetation on the slope.
 - e. Maintain or enhance predevelopment stream and wetland habitat conditions with respect to recharge, hydrology, water temperature, and riparian condition. This should be measured, defined, and monitored long-term.
 - f. Monitor the biological and physical indicators of stream, pond and wetland quality. Inspection, maintenance, and reporting to the Planning Board should be included.
- E. Explore a citizen's environmental advisory committee (or a Conservation Advisory Committee pursuant to New York State General Municipal Law 12-F, Section 239-X) to advise the Town Board, Planning Board, and Zoning Board of Appeals on environmental resources in Jewett.¹⁰
- F. Establish a zoning requirement of 100' as a buffer for streams where no development is allowed. Consider the incorporation of recommendations made by the Greene County Soil and Water Conservation District's study on the Schoharie and East Kill Creeks.
- G. Incorporate and reference floodplain maps in the zoning so that all parties understand the locations of flood prone areas and include flood protection requirements during project review. Establish a set of floodplain regulations consistent with FEMA flood requirements.
- H. Consider developing a locally designated Type I under the New York State Environmental Quality Review Act (SEQRA) list of actions for Jewett.¹¹

¹⁰ Authorized through New York State law, this advisory committee can play an important role in helping provide support to these boards and education to the general public on the environment and natural resources in Jewett. One recommended role for this citizens group is to conduct site visits and review subdivision or other development plans and offer the Planning Board comments related to the environment or potential impacts that should be considered during project review.

¹¹ This means that in addition to the state regulations, the town has also decided that certain kinds of development are more likely to have negative environmental impacts and this automatically requires use of a Full Environmental Assessment Form during project review.

Town of Jewett Comprehensive Plan October 2007

I. Establish a steep slope area overlay zone that includes additional standards relating to siting, grading, erosion, sedimentation, impervious surfaces when development occurs on slopes over 20% or 25%.

1. The standards required within this overlay could include the following:

- a. All structures must be placed in the buildable portion of the parcel and that the amount of grading is limited;
- b. An erosion and sedimentation plan must be submitted to the Planning Board as part of the subdivision process with the goal of ensuring that stormwater runoff rate after development does not exceed the rate that existed prior to the site being developed.
- c. Allow different development densities in this overlay by imposing larger minimum lot sizes, larger open space requirements, and stricter minimum impervious surface requirements for new development.
- d. Require one and two-family dwellings to undergo site plan review (even if no subdivision is being proposed and only a building permit is needed). This will allow Planning Board review of the specific site issues related to steep slopes.

J. Encourage conservative use of woodlands, and natural vegetation, and the maintenance of natural habitats for proper management of native wildlife throughout Town by discouraging unneeded vegetation and tree removal.

VI. Strategies to Protect Scenic Resources

A. Update the existing scenic resources map included in this plan developed by Greene County. This update should include significant public involvement and should prioritize or rate different locations for their scenic qualities.

B. Develop design and site guidelines to protect scenic views which should be mandatory for commercial development, major subdivisions and for residential development in critical view areas. Standards used for protecting scenic views include use of setbacks, screening (or lack of), clustered or conservation subdivisions, landscaping requirements, and careful road access management to minimum multiple curb cuts along rural roads.

C. Consider use of a density bonus (pursuant to New York State Town Law 261-b) as an incentive to protect important viewsheds or other environmental resources. A density bonus would allow a landowner to build additional dwellings above what is allowed in zoning.

D. Establish limits of disturbance for each site in subdivision during the review and approval process.

Town of Jewett Comprehensive Plan October 2007

1. Site disturbance would include the structure, accessory structures, utilities, drainage areas and septic fields. Amend subdivision law to require establishment of limits of disturbance on the subdivision plat using criteria designed to minimize visual impacts, prevent erosion, promote fire prevention and safety, and preservation of significant vegetation, if present.

E. Use clustering or conservation subdivision design techniques (discussed in Appendix D).

VII. Strategies to Protect Open Spaces

A. Require that subdivisions that are designed as a cluster or conservation subdivision have a set percentage of open space that must be permanently preserved on the parcel.

B. Amend subdivision and zoning ordinances to define the kind of open space desired to be preserved during development.¹²

C. Seek to preserve and link lands for open space that have multiple uses such as hiking, biking, wildlife, etc.

D. Encourage the use of the New York State 480-a Forest Tax Law exemptions. This law allows forest owners to apply for up to 80% tax exemption by committing their forest land to a DEC approved forest management plan. The forested parcel must be at least fifty acres in size and managed for the production of forest crops for 10 years.

E. Encourage acquisition of important open space lands through voluntary use of conservation easements, lease arrangements, management agreements, mutual covenants, fee simple sales or donations.

F. Offer a density bonus as an incentive to preserve open space when development occurs.

G. For all subdivisions, direct land disturbances away from ecologically sensitive lands.

H. Consider adding requirements to identify slopes greater than 25%, ridgelines, open fields and critical wildlife habitats as features that should be located on a subdivision plat.

I. Update the historic inventory in Jewett.

¹² In addition to wet, flood prone or steep areas, desired elements of natural and cultural landscapes should be listed and described. This may include woodland habitats, farmland, historic resources, views into and out of the site, and groundwater recharge areas. Decide if you want these open space lands to include active recreation (such as golf courses or other active outdoor recreational activities) or to be set aside as undeveloped open spaces.

VIII. Strategies Related to Agriculture

A. Consider amending the zoning law to make it more “farm-friendly”. Consider the following options:

1. Add or change definitions of agriculture to match that established by State Agriculture and Markets definition¹³.
2. Consider changing the definitions for farm so that it is not confined to “conventional” operations and add additional definitions for farm operation, horse farm, stables, niche farming, agribusiness, farm markets, farm stands, farmland, and riding academy consistent with state established definitions.
3. Zoning should be consistent with New York State Agriculture and Markets Law farm worker housing requirements.
4. New development should provide a buffer between itself and any neighboring farms.
5. Ensure that the Planning Board follows all provisions of Agriculture and Markets 25-aa Section 305-a which require use of an agriculture data statement, a disclosure statement, and evaluation of impacts of a proposed use on continuing agriculture in or adjacent to the New York State ag district in Jewett.
6. Institute land use methods as discussed in other goals including clustering, conservation subdivision design, and use of density instead of minimum lot sizes to preserve as much active agricultural lands as possible.
7. Consider other land use methods to benefit farming such as:

¹³ “Farm operation” means the land and on-farm buildings, equipment, manure processing and handling facilities, and practices which contribute to the production, preparation and marketing of crops, livestock and livestock products as a commercial enterprise, including a “commercial horse boarding operation” as defined in subdivision thirteen of this section and “timber processing” as defined in subdivision fourteen of this section. Such farm operation may consist of one or more parcels of owned or rented land, which parcels may be contiguous or noncontiguous to each other. “Land used in agricultural production” means not less than seven acres of land used as a single operation in the preceding two years for the production for sale of crops, livestock or livestock products of an average gross sales value of ten thousand dollars or more; or, not less than seven acres of land used in the preceding two years to support a commercial horse boarding operation with annual gross receipts of ten thousand dollars or more. Land used in agricultural production shall not include land or portions thereof used for processing or retail merchandising of such crops, livestock or livestock products. See New York State Agriculture and Markets Law Section 25AA, Section 301 for additional definitions.

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Town of Jewett Comprehensive Plan October 2007

- a. Consider use of a density bonus where a landowner receives added density in exchange for permanently protecting active farmland.
 - b. Use zoning and subdivision to minimize new development impact on existing farms. Consider standards that steer development away from prime agricultural soils and existing operations to the maximum extent practical. Zoning should not put up barriers to new or existing farming operations. (Note that Map 12 shows both prime farmland soils and soils of statewide importance. These are soils designated by the County in the Greene County Soil Survey. They have physical characteristics that make them very suitable for farming activities. These are not regulatory categories; these are locations where farming would be more profitable due to better quality soils.)
- B. Work with the county and local land trusts such as the Greene Land Trust to explore opportunities for fee-simple acquisitions of farmland, advanced acquisition and land banking, and purchases or donations of development rights (conservation easements).
- C. Consider offering additional property tax incentives above and beyond what the state offers for lands eligible for agricultural exemptions.
- D. Ensure that the Town Assessor follows through on imposing fees and penalties required by New York State law for properties that have received agricultural tax benefits if they are converted to non-farm use.
- E. Work with Greene County economic development officials to pursue a program in agricultural economic development that would benefit farms in Jewett.

IX. Strategies Related to Local Government, Community-Building, and Community Services

- A. Encourage creation of a multi-use government facility to provide community services and recreational facilities.
- B. Seek additional funding to meet the professional management needs of the Town.
- C. Commit to a comprehensive training program for local officials. Current State law requires training of all ZBA and Planning Board members and the Town should support that with reimbursement of expenses. The Town should budget and fund this training and regularly send members to the various trainings around state (New York Planning Federation, New York Association of Towns) and/or sponsor local trainings with other area governments.

Town of Jewett Comprehensive Plan October 2007

D. Improve and expand services so that our citizens have better access to health services, a network of social services for our senior citizens, well maintained roads, and good law enforcement. Work with neighboring towns to improve health services.

E. To increase public participation in local government, consider the following:

1. Add this plan and its supporting documentation and maps to the Town website.
2. Consider having the Town Board do a one or two page annual report (write and/or posted to the website) to the citizens that summarizes a years worth of efforts or work accomplished at the Town Board level.
3. Hold an annual town meeting, widely advertised and open to the public. This is a way for the Town Board to annually update the “Strengths, Weaknesses, Opportunities and Threats” analysis included in this plan and keep policies, plans, and programs up to date.
4. Consider a welcome wagon-type concept for new residents that include a packet of relevant information on town government, activities, plans, maps, etc.
5. Print and widely distribute an executive summary of the Comprehensive Plan to citizens so that they have knowledge and understanding of it.

F. To increase the effectiveness of the local government officials and boards, consider the following:

1. Provide funding for the Planning Board to become a member of the American Planning Association and subscribe to the Planning Commissioners Journal so that they can have up-to-date resources.
2. The Planning Board and ZBA should be required to prepare an annual report to the Town Board on issues/problems/administrative needs related to the zoning, site plan and subdivision laws and the Town Board should annually make changes to these local laws as recommended by the Planning Board or ZBA so that these documents are useful and up to date.
3. Evaluate, on an annual basis, all pay scales for elected and appointed officials in Town. The pay scale of the Town Supervisor should reflect the demanding and complex role of this position.

G. Encourage emergency services to develop a Capital Expenditure Plan so those organizations can maintain viability and plan ahead for purchasing needed equipment and changing staff needs. Emergency service organizations should share these plans with the Town Board.

Town of Jewett Comprehensive Plan October 2007

- H. Consider community recreation opportunities such as a Town recreation area.
- I. Use zoning and subdivision regulations to provide for continued recreation access and lands.
- J. Use of residential clusters and conservation subdivisions can help ensure that open spaces are available for recreation. Over time, work towards linking preserved parcels of land with trails and other green spaces.
- K. Increase access to the Schoharie and East Kill Creeks. The Town could approach landowners for voluntary permission for public access. Organizations such as the New York Conservation Society can offer assistance in developing agreements and working out insurance and liability issues. Other options for increasing recreational access include purchase of lands and purchase of easements to lands.
- L. Work with New York State Department of Environmental Conservation to coordinate utilization of the various trails through State lands. Actively participate with the State as they develop new forest management plans to ensure that the needs and concerns of Jewett are incorporated.
- M. In order to be successful in grant applications, the Town should prepare a well-thought out set of plans and grant ideas that include project need, work scope, budget, and time frames. Having these ready will allow Jewett to be better prepared to develop grant applications as they become available.

X. Strategies to Enhance Administration and Effectiveness of Local Laws

- A. Enhance site plan review law.
 - 1. Incorporate site plan review into the zoning law.
 - 2. Site plan review should be required for all new structures, erection of all signs, all non-subdivision residential developments, and change of uses. Other recommendations related to site plan review include:
 - a. Authorize the Planning Board to review and approve site plans.
 - b. Add purpose statements that clearly outline the reasons for reviewing and approving site plans and make these purpose statements consistent with the goals of this plan.
 - c. Change the option of holding a public hearing to “shall” hold a public hearing.

Town of Jewett Comprehensive Plan October 2007

- d. Change the time needed to hold a public hearing from 45 days to 62 days after a complete application to be in line with State 274-a.
- e. Change the time needed to make a decision after the public hearing from 45 days to 62 days to be in line with State 274-a.
- f. Add statements to ensure that the process includes all requirements related to SEQR, County Planning Board Review (239-m), use of agricultural data statements, and consistency with NYC DEP requirements¹⁴.

B. Update the Town's subdivision law to strengthen the law and further assist the Town in retaining its rural character and environmental health goals as follows:

- 1. The current subdivision law allows the Planning Board to issue a waiver of requirements. The language should be to require that the applicant request a waiver and that the Planning Board respond with a decision on the waiver request in writing.
- 2. Throughout the Subdivision law, but especially in the beginning of the document, there needs to be a comprehensive set of purpose statements written stating the reasons for the regulations. These statements need to be strongly related to and consistent with the goals and vision as established in this comprehensive plan.
- 3. For both the minor and major subdivision sections, there needs to be additional language outlining other requirements that the Planning Board must carry out during the process including SEQR, Greene County Planning Board Review (as per GML 239-m), and use of the required Agricultural Data Statement (for lands in or within 500' of a NYS Agricultural District).
- 4. The subdivision law should include references to appropriate NYC DEP Watershed Regulations. (See also Recommendation (C) (7) below.)
- 5. Article V (Variances) must make reference as well to the clustering provisions allowed by the Zoning Law. There is no connection between the subdivision and zoning provision for clustering and that needs to be added in. This would be a logical spot for it.
- 6. Subdivision regulations need to be updated to reflect federal and State requirements related to stormwater and erosion control. Currently all lot disturbances of greater than 1 acre require DEC review.
- 7. Review and amend the subdivision definitions section, especially to add such terms as buildable lot, building envelope, cluster subdivision, conservation subdivision, open space, and parcel or lot.

¹⁴ See Section VIII for summary on DEP requirements.

Town of Jewett Comprehensive Plan October 2007

8. Consider establishing a site visit as a formal part of the subdivision process.
9. Add into the final major subdivision plat approval process proof of compliance with all DOH, DEP, and other State and federal permits including SPDES, stream disturbances, wetland and wetland buffer requirements, highway work, curb cuts, etc.
10. Establish record keeping mechanism to track subdivision approvals over time.
The Planning Board should keep a permanent record, preferably on a master map, showing all subdivision approvals. Further, the subdivision law should be amended to require placement of a note on a final subdivision plat indicating the number of lots created and defining the subdivision as a minor or major subdivision.
11. Zoning and subdivision laws should reflect the New York State requirements for both Zoning Board of Appeals and Planning Boards to have all their decisions in writing and filed with the Town Clerk within five business days.

C. Update the Town's zoning land use law as follows:

1. Update purpose statements that are consistent with this comprehensive plan and that emphasize environmental protection and maintenance of rural character.
2. The zoning should offer more specific special use standards for review by the Planning Board. Currently many uses are permitted through the special use process, but there is little guidance given to the Planning Board that reflects development expectations for those uses. Further, it is recommended that the section on standards be expanded to cover review rural character, environmental protection, and other goals as outlined in this plan.
3. There is a conflict between the use schedule and the Timber Harvesting rules contained in the zoning. Timber harvesting is listed as a permitted use in all zoning districts. A permitted use is one that does not need further Planning Board or Town review (except for a building permit). Yet, the section on Timber Harvesting indicates that (with some exceptions), all timber harvesting operations need a zoning permit. This should be clarified or the definition for a "permitted use" must be changed to reflect the need for a timber harvesting permit. Further, it is recommended that clearing of land for rights of ways for utilities should NOT be exempted from the Timber Harvesting rules. These uses can be very disruptive and are on-going activities that should be reviewed by the Town. Consider adding use of Best Management Practices as a requirement of obtaining a Timber Harvesting Permit. This would help ensure that current accepted harvesting practices as advocated by DEC are followed.

Town of Jewett Comprehensive Plan October 2007

4. Strengthen the Clustering section. Include in these regulations provisions for ownership and maintenance of open space lands, use of Home Owner Associations, and approved uses for open space lands that are preserved.
5. Offer more details on the procedures for the Zoning Board of Appeals so that they are fully consistent with New York State Law. Ensure that SEQRA, Greene County Planning Board review, and NYC DEP requirements are adequately outlined as to process and review standards. It may be helpful to design a review checklist that both the planning board and applicant can use to make sure all steps have been followed. Specifically, the administrative procedures and requirements included in the zoning need to be strengthened.
6. Strengthen the enforcement and violations section.
7. Enhance compliance with DEP regulations. The zoning law requires all development to be compliant with the New York City Watershed Rules and Regulations. However, none of the specific requirements are listed. So that both the Planning Board and applicants understand what is required, it is recommended that the zoning law be amended to include the NYC setback requirements as outlined in Appendix A, Section H of this plan instead of a general reference as currently exists. Other recommendations to clarify expectations related to the existing DEP regulations include:
 - a. In the HR District, zoning requires a minimum lot size of 1.5 acres. This is likely to be large enough to incorporate the setback and siting requirements of NYC. However, it is possible that the lot may not be large enough to meet setback requirements depending on site conditions and presence of streams. It is recommended that language be added to the zoning to indicate this.
 - b. Article VII (Non-conforming buildings and uses) allows for existing undersized lots to be considered complying if the lot is less than 20,000 square feet with a width of less than 80 feet. Although this is appropriate, common, and acceptable for local zoning laws, such a lot may not meet the NYC required setbacks as outlined above. It is recommended that a note be added to this section indicating that in order for an existing, undersized lot to be considered complying, it must also meet the requirements of the NYC Watershed.
 - c. Subdivision Law Article VI, Section 3(I) currently requires a 20' watercourse easement or drainage right-of-way when a watercourse separates a proposed road from abutting property. Given the NYC Watershed regulation that no road, driveway or impervious surface be allowed within 100 feet of a perennial stream and 50 feet of an intermittent stream, the 20' local watercourse easement requirement may not be adequate. It is recommended that this section be amended to require setbacks consistent with the NYC Watershed Regulations.

Town of Jewett Comprehensive Plan October 2007

D. Conduct a demographic study of Jewett that includes the second homeowners no later than the next revision of this plan. Use this information to develop additional strategies necessary to meet the goals and vision of this comprehensive plan.

E. The Town should stay technologically current and provide for integrated computers between all departments of Jewett.

F. Provide for use of the GIS data and maps created for this Plan on a regular basis on Town computers. This will allow parcel-based information to be accessed. This information will be especially useful for the Planning Board to use as they review projects. Work with Greene County to annually update the tax parcel information portion of this database.

G. Formally review and update this plan every five years.

VI. ACTION PLAN AND IMPLEMENTATION PRIORITIES

Action and Implementation Plan

This section outlines information needed to help the Town Board of Jewett implement this Comprehensive Plan. Once adopted, the Plan's implementation is overseen by the Town Board. Ongoing leadership will be necessary to follow through and implement these strategies over the next ten to fifteen years. Some action items are ongoing – meaning that they are regular actions to take place on an annual basis. Others are high priority action items that should be implemented within the first year after Plan adoption. Still others are medium or long-range strategies that can be implemented at a later date. The information contained in the table below should be used by the Town Board as a checklist and guide to help them determine what tasks need to be worked on, when, and who can help. This table contains summary of strategies and to read the full detail provided in the plan, please see the pages as referenced below.

Key to Action

Each strategy represents a specific type of action that the Town can take. These types of actions are:

Capital Improvement: Any action that results in an investment and improvement in a property, structures, equipment, staff or other similar items.

Program: Any action that results in establishment of a plan, activity, committee, proposal, or similar items.

Policy: Any action that results in establishment of a set policy that will govern the actions of the Town.

Regulatory: Any action that results in the development of a new law or amendment of existing land use related laws in the Town. This typically refers to zoning, site plan review, or subdivision laws.

In order to better track the implementation process, a time frame has been designated that projects when the action should be accomplished. It is likely that priorities may change with the availability of funding sources for particular projects. The time frame covers fifteen years and is indicated by the following codes:

- S** Short Term: 0 to 2 years *(Note that most of the zoning, subdivision and site plan review related strategies are designated as being implemented in the short-term.)*
- I** Intermediate: 3 to 5 years
- L** Long Term: 6 to 15 years
- O** Ongoing, to be carried out each year

Town of Jewett Comprehensive Plan October 2007

Strategies/Action	Type of Action	Page Number in Plan	Time Frame
I. Strategies Related to Rural Character			
A. Zoning, subdivision and site plan regulations should give authority to the Planning Board to review and plan rural character. This includes features such as ridgelines, tree lines, hedgerows, streams, wetlands, steep slopes, building mass and proportion, etc.	Regulatory	11	S
B. Encourage residential and commercial development in hamlets built to be consistent with those traditional development patterns. Small business growth in the hamlets serving residents will be particularly important. This includes hamlet style design standards, controlling commercial building footprints, review and amending use tables to permit mixed uses in hamlets, and reviewing hamlet boundaries to create “room to grow”.	Regulatory	11	S
C. Encourage residential development in rural areas to be consistent with rural character. This includes using rural road styles, prevention of cookie-cutter style subdivisions, review of the allowable use table in zoning, using commercial development standards, and targeting higher intensity uses to be allowed in hamlets.	Regulatory	12	S
D. It is important to prohibit county and state roads from development in a “strip” fashion. Avoid commercial development along major roads.	Regulatory and Policy	12	S
E. Site plan review should have language in it to authorize the planning board to review building design for commercial buildings and to set standards and expectations for site layout and design consistent with the historical and rural character of the Town.	Regulatory	12	S
F. Adopt an adult use law in Jewett.	Regulatory	12	S
G. Evaluate boundaries of zoning districts with topography and other environmental conditions and amend or adjust boundaries as needed to have a better match with the purposes of the districts.	Regulatory	13	S
H. Update subdivision, zoning and site plan review laws to include historic resources as important features to be protected.	Regulatory	13	S
I. Develop environmental performance standards in zoning to establish standards to control the intensity	Regulatory	13	S

Town of Jewett Comprehensive Plan October 2007

of land use to ensure that new development is consistent with the environmental, open space, and rural character goals of the Town.			
J. Jewett already allows use of clustering. However, Jewett's provision can be strengthened.	Regulatory	13	S
K. Future steps should be taken to amend zoning to reduce the overall and long-term growth potential of the Town.	Regulatory	14	I
L. Include environmental performance standards.	Regulatory	14	S
M. Consider creating a new zoning district to encompass all State and City owned lands.	Regulatory	14	S
II. Strategies Related to Future Housing			
A. Maintain current zoning that directs higher density housing options such as multi-family dwellings to the hamlet areas.	Regulatory	15	S
B. Create moderately-priced housing conditions in Town by implementing recommended zoning changes and developing a strategy for housing.	Regulatory	15	I
C. Encourage the development of senior housing opportunities in the Town.	Policy and Regulatory	16	L
D. Consider use of inclusionary zoning. This should be applied only to large developments.	Regulatory	16	I
III. Strategies Related to Small Business Development			
A. Encourage development of broadband and other telecommunications facilities for personal, business, and home occupation uses. See Appendix F for additional details.	Policy and Program	16	S
B. Encourage home based and other small businesses that are consistent with the rural nature of the Town and that utilize adaptive re-use of existing structures.	Policy and Program	17	O
IV. Strategies Related to Infrastructure			
A. There are innovative ways to handle waste water treatment should it become necessary in the future. The Town of Jewett should explore all management and technical options to handle waste treatment in the hamlets.	Capital Improvement	17	L
B. In order to control traffic along State and County routes as development continues, amend zoning and site plan review laws to institute traffic access management techniques for commercial developments and major subdivisions.	Regulatory	17	I
C. Ensure that adopted local highway standards incorporate and allow use of appropriate traffic calming techniques so that they are available if needed for a large scale project.	Regulatory	17	I

Town of Jewett Comprehensive Plan October 2007

D. Maintain existing rural road standards as outlined in local law as they provide for new roads consistent with rural character.	Regulatory	17	S
E. Maintain a Capital Improvement Plan that includes a section for the highway department and road maintenance and expand the plan to cover other future capital needs.	Capital Improvement and Program	18	O
F. Consider and plan for accessibility needs of emergency vehicles in the subdivision process.	Regulatory	18	O
G. Over time as development occurs in hamlets, work to create new pedestrian opportunities in hamlets – keep new roads narrow to preserve small-scale hamlet character and promote use by pedestrians with paths.	Program and Capital Improvement	18	L
H. Maintain training for highway crew members by participating in programs such as the Cornell Local Roads Program.	Program	18	O
I. Work with Greene County to increase the availability of county-sponsored transportation for residents, especially for senior citizens, to provide access to shopping areas and health care facilities.	Program	18	O
J. Plan long-term for the more efficient use of our volunteer fire departments and prepare for a possible transition from a volunteer to paid emergency service providers.	Program and Capital Improvement	18	I
V. Strategies Related to Environmental Protection and Open Space			
A. Implement the recommendations contained in the Town of Jewett Groundwater Study.	Program and Regulatory	18	S
B. All subdivision reviews should add emphasis to the importance of protecting important environmental features during development such as steep slopes, ridgelines and wetlands. Consider authorizing the Planning Board to review and approve the location on the newly created parcel(s) of the area allowed to be disturbed for driveways, buildings and septic systems.	Regulatory	19	S
C. It is recommended that a new section on mining be added to the zoning.	Regulatory	19	I
D. Institute Best Management Practices to reduce erosion, sedimentation, and surface water runoff.	Regulatory and Program	19	I
E. Explore a citizen's environmental advisory committee (or a Conservation Advisory Committee pursuant to New York State General Municipal Law 12-F, Section 239-X) to advise the Town Board, Planning Board, and Zoning Board of Appeals on environmental resources in Jewett.	Program	20	S

Town of Jewett Comprehensive Plan October 2007

F. Establish a zoning requirement of 100' as a buffer for streams where no development is allowed. Consider the incorporation of recommendations made by the Greene County Soil and Water Conservation District's study on the Schoharie and East Kill Creeks.	Regulatory	20	S
G. Incorporate and reference floodplain maps in the zoning so that all parties understand the locations of flood prone areas and include flood protection requirements during project review. Establish a set of floodplain regulations consistent with FEMA flood requirements.	Regulatory	20	S
H. Consider developing a locally designated SEQR Type I list of actions for Jewett.	Program and Regulatory	20	I
I. Establish a steep slope area overlay zone that includes additional standards relating to siting, grading, erosion, sedimentation, impervious surfaces when development occurs on slopes over 20% or 25%.	Regulatory	20	S
J. Encourage conservative use of woodlands, and natural vegetation, and the maintenance of natural habitats for proper management of native wildlife throughout Town by discouraging unneeded vegetation and tree removal.	Program and Regulatory	21	S
<u>VI. Strategies to Protect Scenic Resources</u>			
A. Update the existing scenic resources map included in this plan developed by Greene County,	Program	21	S
B. Develop design and site guidelines to protect scenic views which should be mandatory for commercial development, major subdivisions and for residential development in critical view areas.	Regulatory	21	S
C. Consider use of a density bonus as an incentive to protect important viewsheds or other environmental resources.	Regulatory	21	S
D. Establish limits of disturbance for each site in subdivision during the review and approval process.	Regulatory	21	S
E. Use clustering or conservation subdivision design techniques (discussed in Appendix D).	Regulatory	22	S
<u>VII. Strategies to Protect Open Spaces</u>			
A. Require that subdivisions that are designed as a cluster or conservation subdivision have a set percentage of open space that must be permanently preserved on the parcel.	Regulatory	22	S
B. Amend subdivision and zoning ordinances to define the kind of open space desired to be preserved during development.	Regulatory	22	S

Town of Jewett Comprehensive Plan October 2007

C. Seek to preserve and link lands for open space that have multiple uses such as hiking, biking, wildlife, etc.	Program and Policy	22	O
D. Encourage the use of the New York State 480-a Forest Tax Law exemptions.	Program	22	O
E. Encourage acquisition of important open space lands through voluntary use of conservation easements, lease arrangements, management agreements, mutual covenants, fee simple sales or donations.	Capital Improvement, Policy, and Program	22	O
F. Offer a density bonus as an incentive to preserve open space when development occurs.	Regulatory	22	I
G. For all subdivisions, direct land disturbances away from ecologically sensitive lands.	Regulatory	22	S
H. Consider adding requirements to identify slopes greater than 25%, ridgelines, open fields and critical wildlife habitats as features that should be located on a subdivision plat.	Regulatory	22	S
I. Update the historic inventory in Jewett.	Program	22	I
VIII. Strategies Related to Agriculture			
A. Consider amending the zoning law to make it more “farm-friendly”.	Policy and Program	22	S
B. Work with the county and local land trusts such as the Greene Land Trust to explore opportunities for fee-simple acquisitions of farmland, advanced acquisition and land banking, and purchases or donations of development rights (conservation easements).	Program	24	O
C. Consider offering additional property tax incentives above and beyond what the state offers for lands eligible for agricultural exemptions.	Program and Policy	24	I
D. Ensure that the Town Assessor follows through on imposing fees and penalties required by New York State law for properties that have received agricultural tax benefits if they are converted to non-farm use.	Program and Policy	24	O
E. Work with Greene County economic development officials to pursue a program in agricultural economic development that would benefit farms in Jewett.	Program	24	O
IX. Strategies Related to Local Government, Community-Building, and Community Services			
A. Encourage creation of a multi-use government facility to provide community services and recreational facilities.	Capital Improvement and Program	24	L
B. Seek additional funding to meet the professional	Program	24	O

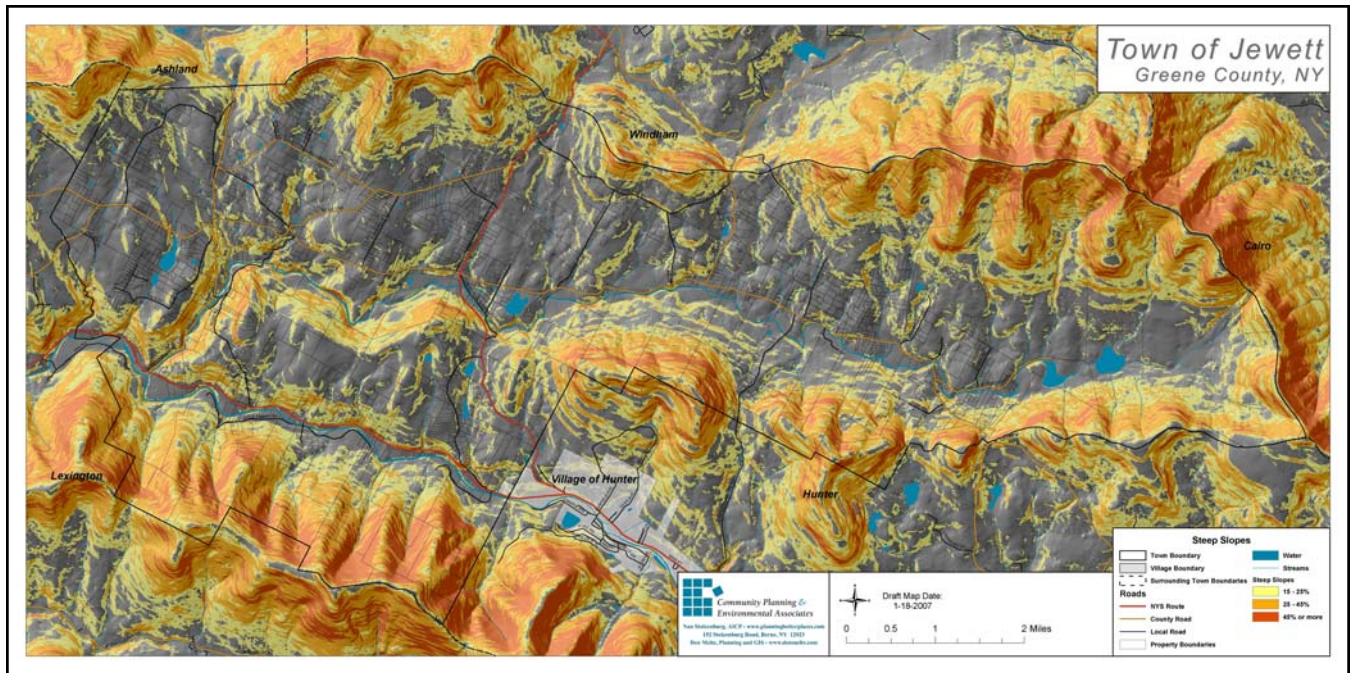
Town of Jewett Comprehensive Plan October 2007

management needs of the Town.			
C. Commit to a comprehensive training program for local officials.	Program and Policy	24	O
D. Improve and expand services so that our citizens have better access to health services, a network of social services for our senior citizens, well maintained roads, and good law enforcement. Work with neighboring towns to improve health services.	Program, Policy and Capital Improvement	24	O
E. Implement strategies to increase public participation.	Program	24	O
F. Implement strategies related to training and reporting of the Planning Board and ZBA.	Program	25	O
G. Encourage emergency services to develop a Capital Expenditure Plan so those organizations can maintain viability and plan ahead for purchasing needed equipment and changing staff needs.	Capital Improvement	25	O
H. Consider community recreation opportunities such as a Town recreation area.	Program	25	O
I. Use zoning and subdivision regulations to provide for continued recreation access and lands.	Regulatory	25	S
J. Work towards linking preserved parcels of land with trails and other green spaces.	Program	25	O
K. Increase access to the Schoharie and East Kill Creeks.	Program	25	I
L. Work with NYS DEC to coordinate utilization of the various trails through State Lands.	Program	26	O
M. In order to be successful in grant applications, the Town should prepare a well-thought out set of plans and grant ideas that include project need, work scope, budget, and time frames.	Program	26	O
<u>X. Strategies to Enhance Administration and Effectiveness of Local Laws</u>			
A. Enhance site plan review law.	Regulatory	26	S
B. Update the Town's subdivision law.	Regulatory	27	S
C. Update the Town's zoning land use law as recommended in plan.	Regulatory	28	S
D. Conduct a demographic study of Jewett that includes the second homeowners no later than the next revision of this plan.	Program	29	I
E. The Town should stay technologically current and provide for integrated computers between all departments of Jewett.	Program and Capital Improvement	29	O
F. Provide for use of the GIS data and maps created for this Plan on a regular basis on Town computers.	Program and Capital Improvement	29	O
G. Formally review and update this plan every five years.	Program and Policy	29	I

VII. MAPS

1. Roads and Property Lines
2. Water Features
3. Topography
4. Steep Slopes
5. Flood Hazards
6. Major Watersheds
7. Sub-Watersheds
8. Bedrock Geology
9. Surficial Geology
10. Property Class
11. Agriculture
12. Farmland
13. Zoning
14. School Districts
15. Historic Sites and Archeological Areas
16. Government-Owned Properties
17. Aerial Photograph, 2004
18. Hamlets
19. Map of Important Locations
20. Scenic Roads and Views
- 21a. Soil Limitations – Drainage
- 21b. Soil Limitations – Water Table
- 22a. Buildout – Existing Residential Uses
- 22b. Buildout – Zoning Districts
- 22c. Buildout – Under Size Lots
- 22d. Buildout – Fully Built Parcels
- 22e. Buildout – Buildable Parcels
- 22f. Buildout – Environmental Constraints
- 22g. Buildout – All Environmental Constraints Merged
- 22h. Buildout – Buildable Area within Buildable Parcels
- 22i. Buildout – Potential New Residential Uses Without Subtracting Environmental Constraints
- 22k. Buildout – Potential New Residential Uses After Subtracting All Environmental Constraints

Town of Jewett Comprehensive Plan



Appendices A - F



October 2007

APPENDIX TABLE OF CONTENTS

APPENDIX A: PROFILE AND INVENTORY OF RESOURCES.....	1
APPENDIX B: PUBLIC INPUT.....	56
APPENDIX C: WATERSHED CONCEPTS.....	66
APPENDIX D: CONSERVATION SUBDIVISIONS.....	70
APPENDIX E: GROUNDWATER STUDY.....	72
APPENDIX F: INFORMATION ON WIRELESS NETWORKS.....	85

APPENDIX A: PROFILE AND INVENTORY OF RESOURCES

A. Environmental Resources

1. Geologic Setting

A. Formation of the Catskill Mountains

Geologically, the Catskills are not true mountains, but an eroded plateau. The bedrock was formed from sediments deposited during the erosion of the former Acadian Mountains to the east, where the Taconics are located today. This erosion took place during the Devonian and early Mississippian period, 395 to 325 million years ago. The sediments formed a large delta in the sea covering the present day Catskill Mountain area. Over time these sediments were buried by sediments from other areas, compressed, and slowly became solid rock. The entire area then experienced a period of uplift, which caused the overlaying sedimentary rocks to erode. Today, those upper sedimentary rocks have been completely removed, allowing the Devonian and Mississippian rocks to be exposed. Today's Catskills are a result of the continued erosion of these rocks, both by streams and by glaciers. Because of this unique mountain building process, the Catskills have very few naturally formed lakes and ponds. Nearly all of the water bodies in the Catskills are manmade.

B. Topography

The Town of Jewett is bounded by the Lexington and the East Kill Mountain Ranges to the South, and the Escarpment Range to the North. The Lexington Range's highest peak is Rusk Mountain with an elevation of 3,680 feet, and also includes Evergreen, and the eastern slope of Pine Island Mountain. The East Kill Range includes Stopple's Point (the eastern most point of the town), Star Rock, Parker Mountain, East Kill (or Onteora) Mountain, and the East Jewett Range. The Escarpment Range includes Blackhead Mountain at 3,940 feet, Blackdome Mountain at 3,980 feet, Thomas Cole Mountain at 3,940 feet, Van Loan Hill, Round Hill, Cave Mountain, and the eastern slope of Tower Mountain. Lands having 15 to 30% slopes are located on the lower slopes of major mountains, particularly the ridge which defines the East Kill Valley from the Schoharie Valley. Areas having slopes greater than 30% consist of the upper elevations of the Blackhead Range, Onteora Mountain and the Evergreen-Rush Mountain area.

The elevation of Jewett ranges from the peak of Blackdome Mountain (3,940 feet) to 1,360 feet where the Schoharie Creek exits the town to the west, a difference of 2,580 feet. Approximately half of the town (15,962 acres) lies at an elevation between 1,300 and 2,000 feet. The remaining 16,274 acres lies between 2,000 and 3,980 feet, with 2,112 acres of that being over 3,000 feet in elevation.

Town of Jewett Comprehensive Plan October 2007

C. Steep Slopes

Being a mountainous town, Jewett contains some extreme topography, particularly at the higher elevations. There are approximately 7,626 acres of land with a slope of 8% or less. 8,997 acres of the town has a slope between 8 and 15%. 7,127 acres are between 15 and 25%, 6,338 are between 25 and 45%, and 2,156 acres have a slope greater than 45%. The majority of these steep slopes occur at the higher elevations. 68% of the land with slopes over 15%, and 80% of the land with slopes over 25% are found at elevations greater than 2,000 feet.

2. Water Resources

A. Watersheds and Water Features

With the exception of a small 228 acre area of the town that lies within the Batavia Kill watershed along its northwestern border, the town of Jewett lies within the Schoharie Creek watershed. The town is also entirely within the New York City drinking water system watershed. 22,078 acres of this watershed is associated with the East Kill, a major tributary of the Schoharie Creek that flows from east to west through the center of the town. The Schoharie Creek enters the town from the Village of Hunter in the southeast, and flows west to where the East Kill joins it near the towns western border. There are numerous small tributaries to both the Schoharie Creek and the East Kill which drain the higher elevations, including John Chase Brook along the western border of the Town, and Halsey Brook in the eastern part of the Town. Both the Schoharie and East Kill are designated by DEC as Class C Streams. This means that DEC considers them suitable for fishing and fish propagation, primary and secondary contact (fishing and boating) recreation even though other factors may limit the use for that purpose. Both are also classified further as spawning streams. Many of the larger tributaries to these streams are also Class C trout streams.

Two large lakes, Colgate Lake (30 acres), and Lake Capra (43 acres), are found at the headwaters of the East Kill, near Halsey Brook. Near the center of town there is another pond along the East Kill, about 23 acres in size. In the east, there are a couple of ponds along the tributary east of John Chase Brook that are 5 and 22 acres in size. All of these lakes and ponds are manmade, or dammed.

There are very few mapped wetlands in Jewett. All of those identified by DEC are found along a stream, or are adjacent to one of the lakes or ponds. The hydric soils identified by the Greene County Soil Survey occur mainly along the major streams and tributaries. These soils might indicate some wetlands that have not yet been mapped by a government agency.

The Town of Jewett is underlain by the Catskill bedrock formation. The Catskill Formation consists of sandstone interbedded with shale and is traversed by numerous joints which are an important factor in the availability of ground water. The higher yields

Town of Jewett Comprehensive Plan October 2007

of ground water come from sandstone which is relatively permeable, while lower yields come from the tightly cemented shale. According to a report on ground water resources prepared by the US Geological Survey in 1954, an average yield of 17 gallons per minute can be obtained from wells situated in the Catskill Formation.

In 2007, a new water study was conducted.

C. Flood Hazards

The Federal Emergency Management Agency (FEMA) has been updating its Flood Insurance Rate Maps (FIRMs) recently. As of this writing, here are draft maps completed, but they have not been officially adopted by the town. Previous FIRMs indicate extensive flood hazards along both the Schoharie Creek and the East Kill.

The Greene County Soil and Water Conservation District is currently completing a stream corridor management plan for the Schoharie and East Kill Creeks. Sedimentation and turbidity of water has been an issue. The plan will concentrate on the stream corridor and additional funding would be needed to expand the study into a full watershed approach.

3. Soils

The steep terrain and history of erosion that formed the Catskills has led to generally thin soils in most parts of Jewett. There are very few soils classified as Prime Farmland, or Soils of Statewide Importance. Where they are found, they occur mostly within the flood plains along the Schoharie and the East Kill.

Although there are few wetlands identified by DEC or the federal government found in Jewett, there are some soils classified as somewhat to very poorly drained. These are generally associated with the upland areas adjacent to the stream network. More extensive, are soils identified as having a low annual depth to water table. 17,112 acres of land in the town (53%) has a soils classification with a potential annual depth to water of less than 137 cm (4¹/₂ feet). They can be found in most areas of the town except at the very highest elevations. This high water table is probably due to the shallow soils, which hinders the infiltration of rainwater.

4. Natural Resources

A. Critical Plants and Animals

According to the New York Natural Heritage Program's Report on Rare Plants, Rare Animals, and Significant Communities, the following species and communities are found in Jewett (See Box for codes):

Species

Town of Jewett Comprehensive Plan October 2007

Appalachian Tiger Beetle: Unlisted, State Rank S2 (along the Schoharie Creek)
Bicknells' Thrush: Special Concern, State Rank S2S3 (in the NY Forest Preserve)
Musk Root: Endangered, State Rank S1 (in the NY Forest Preserve)

Communities

Hemlock-Northern Hardwood Forest: NYS Rank S4, Global Rank G4G5 (in Blackhead Mountains at low to mid elevations). This is a very large, mature forest with potential old growth patches. The forest has diverse species composition along an elevation gradient. It occurs in a largely protected, primarily forested roadless area surrounded by a moderately fragmented landscape.

Beech Maple Mesic Forest: NYS Rank S4, Global Rank G4 (in Blackhead Mountains at low to mid elevations). A very large, diverse and rich matrix forest consisting of mature forest with a primarily undisturbed core and with potential old growth patches. The forest has a high degree of internal connectivity. Beech bark disease has severely altered the structure and composition of the forest. Some parts of this community surrounds summit communities such as the mountain fir forest and mountain spruce-fir forest, and surrounds and abuts hemlock-northern hardwood forest patches.

Spruce Northern Hardwood Forest: NYS Rank S3S4, Global Rank G3G4 (in Blackhead Mountains and Catskill Escarpment). This is a moderately large, apparently maturing to mature forest with minimal disturbance and very good spruce regeneration. Surrounded by an extensive landscape of contiguous, high quality forests, it occurs along the higher elevation ridges in a large roadless block. It is surrounded by the hemlock-northern hardwood forest at the low to mid elevations and the beech-maple mesic forest at mid to high elevations.

Mountain Fir Forest: NYS Rank S2, Global Rank G3 (on Blackhead Mountain). This forest has little disturbance, good diversity and no exotic species and is surrounded by contiguous, high quality forests.

Mountain Spruce-Fir Forest: NYS Rank S2S3, Global Rank G3 (on Hunter Mountain). This is a large occurrence of mountain spruce fir forest in good condition with some old growth patches in an excellent landscape setting on state land. It is a conifer forest occurring on the high-elevation summits and ridges in the Catskill Mountains and extends in patches along the ridges and summits of Rusk, Hunter, and West Kill Mountains.

Town of Jewett Comprehensive Plan October 2007

Significant ecological communities documented from the Town of Jewett; see map for locations and report for details.

Beech-maple mesic forest	S4
Hemlock-northern hardwood forest	S4
Spruce-northern hardwood forest	S3S4
Mountain spruce-fir forest	S2S3
Mountain fir forest	S2

* Rarity in NYS as ranked by NY Natural Heritage Program on a 1 to 5 scale:
S1 = Critically imperiled; S2 = Imperiled; S3 = Rare or uncommon;
S4 = Abundant and apparently secure; S5 = Demonstrably abundant and secure;
SH = Historical records only; no recent information available.

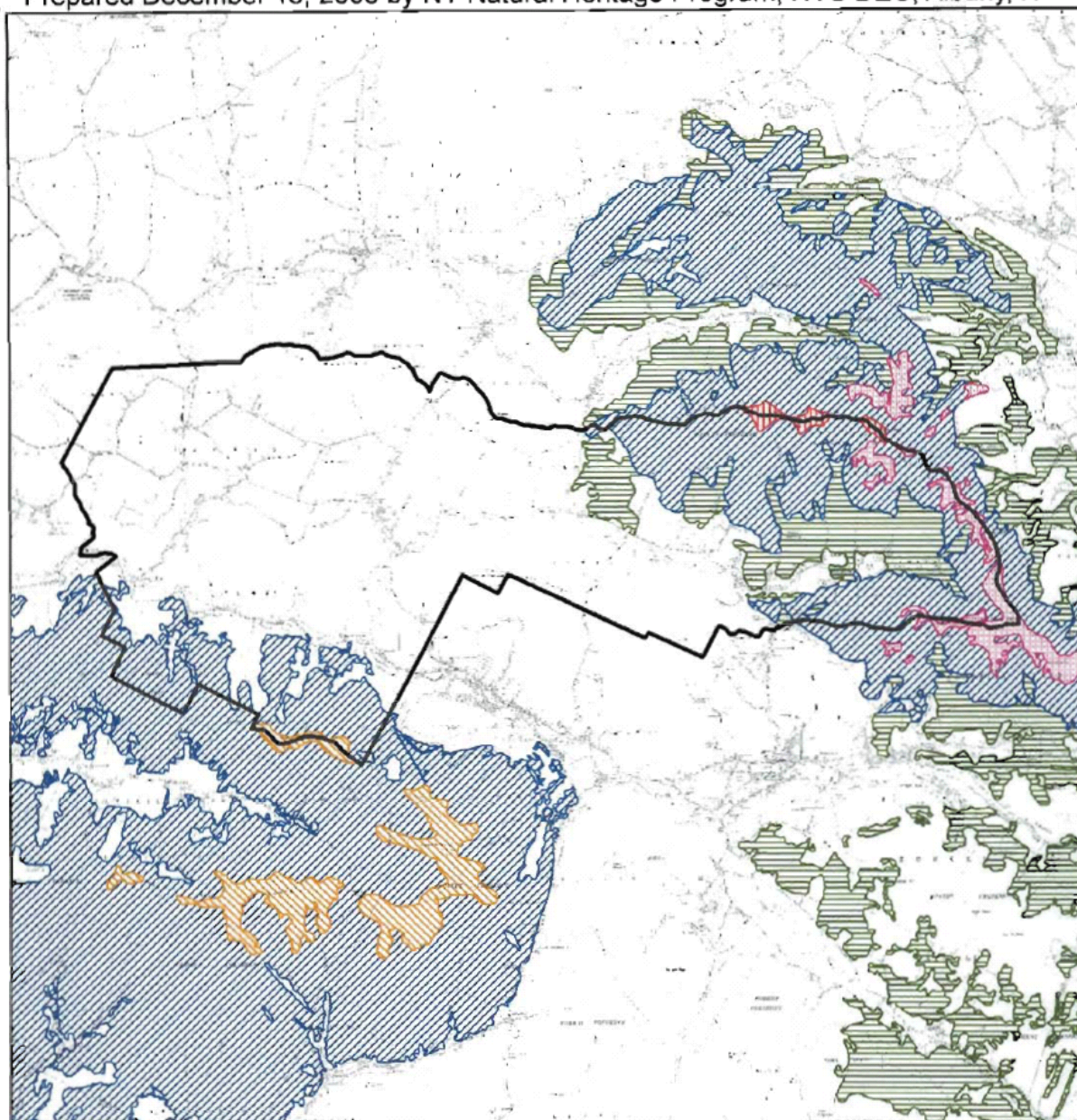


The general locations of these sensitive communities can be found on the map below. Some of these species and communities are considered to be imperiled, rare and in one case, critically imperiled.

Town of Jewett Comprehensive Plan October 2007

Natural Heritage Map of Rare Species and Ecological Communities

Prepared December 15, 2006 by NY Natural Heritage Program, NYS DEC, Albany, NY



Legend

-  Project Site
- NY Natural Heritage Program Database Records***
-  Beech-maple mesic forest
-  Hemlock-northern hardwood forest
-  Mountain fir forest
-  Mountain spruce-fir forest
-  Spruce-northern hardwood forest

1:130,000

0 0.5 1 2 3 4 Miles

*The locations that are displayed are considered sensitive and should not be released to the public without permission.



Town of Jewett Comprehensive Plan October 2007

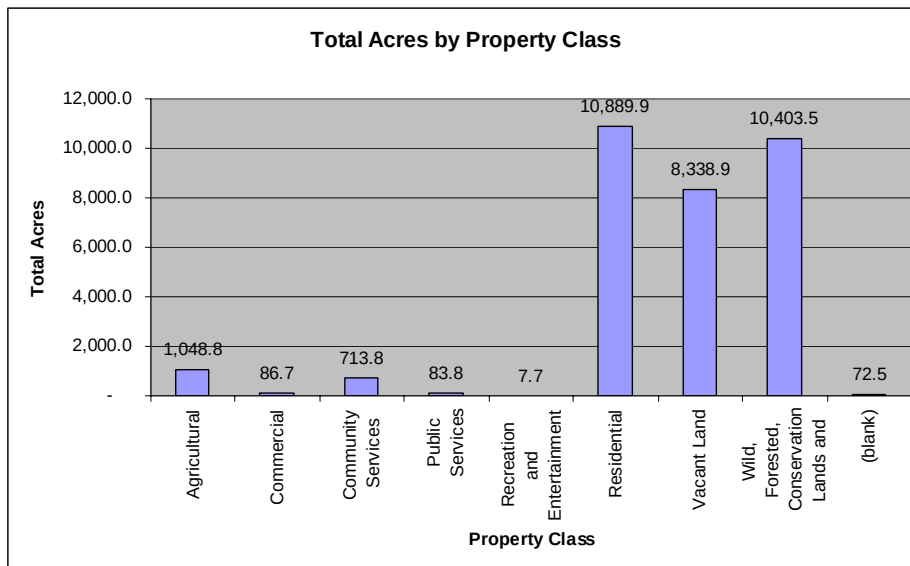
B. Land Use

1. Land Uses and Analysis

The following charts and tables identify and analyze the different types of land uses within the Town of Jewett. This data was based on the most recent tax parcel information. The categories of land uses listed below are those as defined by New York State Real Property Tax Services and assigned to each parcel of land in Jewett by the local tax assessor.

Overview of Major Land Uses by Property Class

Property Class	Number of Parcels	Total Acres
Agricultural	4	1,048.8
Commercial	13	86.7
Community Services	21	713.8
Public Services	1	83.8
Recreation and Entertainment	2	7.7
Residential	1,027	10,889.9
Vacant Land	774	8,338.9
Wild, Forested, Conservation Lands and Public Parks	69	10,403.5
Condominiums	25	72.5
Grand Total	1,936	31,645.7



The following tables offer more detail on the various types of land uses listed above. Each major class (commercial, for example) can be broken down into more specific types of land uses.

These are reflected in the following tables:

Town of Jewett Comprehensive Plan October 2007

Land uses by Agricultural Sub-class

Property Class	Sub-Class	Number of Parcels	Total Acres
Agricultural	Crops	1	232.8
	Livestock	3	816.1
Agricultural Total		4	1,048.8

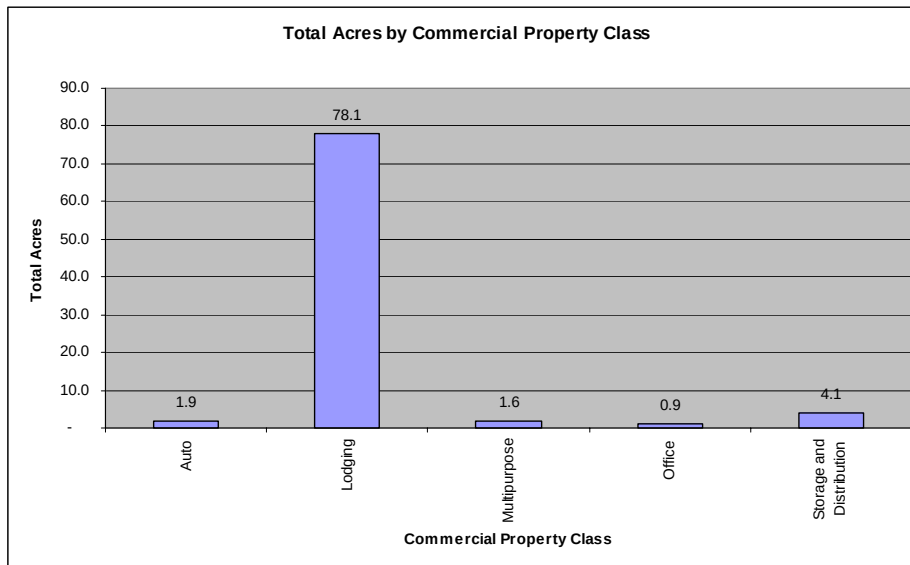
Agricultural District #4, which includes land in portions of the Towns of Ashland, Halcott, Jewett, Lexington, Prattsville, and Windham, has been decreased in size over the years. Only a small portion of Agricultural District #4 is located in Jewett.

Land uses by Wild, Forested, Conservation Lands and Public Parks Sub-class

Property Class	Sub-Class	Number of Parcels	Total Acres
Wild, Forested, Conservation Lands and Public Parks	Government Owned	30	7,314.9
	Private	39	3,088.7
Wild, Forested, Conservation Lands and Public Parks Total		69	10,403.5

Land uses by Commercial Sub-class

Property Class	Sub-Class	Number of Parcels	Total Acres
Commercial	Auto	2	1.9
	Lodging	5	78.1
	Multipurpose	2	1.6
	Office	1	0.9
	Storage and Distribution	3	4.1
Commercial Total		13	86.7



Town of Jewett Comprehensive Plan October 2007

Land uses by Public Services Sub-class

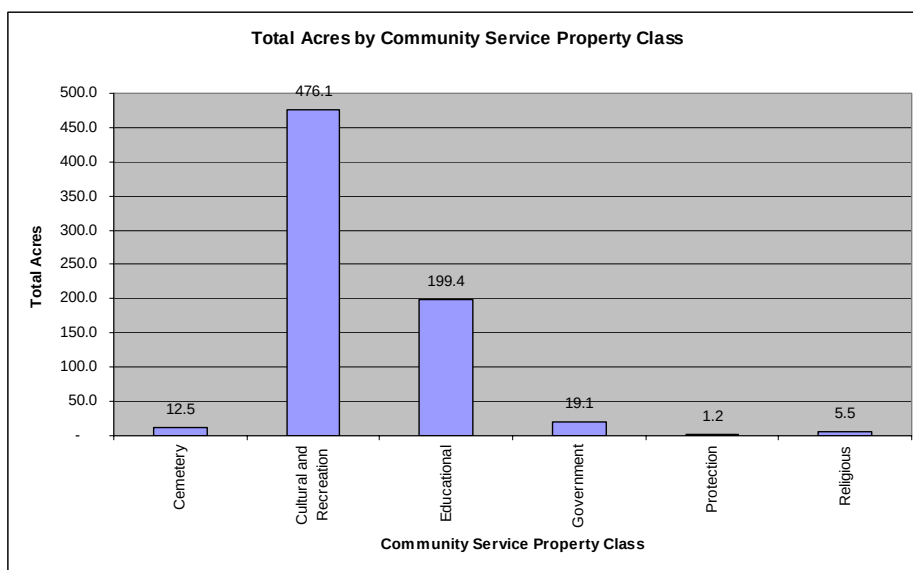
Property Class	Sub-Class	Number of Parcels	Total Acres
Public Services	Communication	1	83.8
Public Services Total		1	83.8

Land uses by Recreation and Entertainment Sub-class

Property Class	Sub-Class	Number of Parcels	Total Acres
Recreation and Entertainment	Social	1	2.5
	Theater and Exhibit	1	5.2
Recreation and Entertainment Total		2	7.7

Land uses by Community Service Sub-class

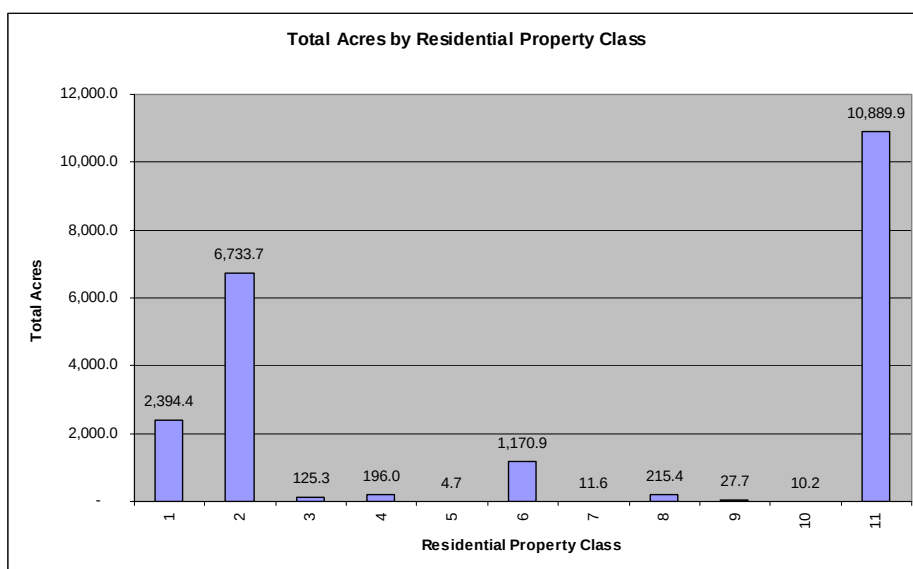
Property Class	Sub-Class	Number of Parcels	Total Acres
Community Services	Cemetery	5	12.5
	Cultural and Recreation	2	476.1
	Educational	1	199.4
	Government	5	19.1
	Protection	3	1.2
	Religious	5	5.5
Community Services Total		21	713.8



Town of Jewett Comprehensive Plan October 2007

Land uses by Residential Sub-class

Property Class	Sub-Class	Number of Parcels	Total Acres
Residential	Single Family	685	2,394.4
	Rural Estate	132	6,733.7
	Seasonal	41	125.3
	Two Family	45	196.0
	Three Family	1	4.7
	Multiple	25	1,170.9
	Apartment Condominium	37	11.6
	Mobile Home	57	215.4
	Multi-Purpose	2	27.7
	Commercial	2	10.2
Residential Total		1,027	10,889.9



Land uses by Vacant Land Sub-class

Property Class	Sub-Class	Number of Parcels	Total Acres
Vacant Land	Commercial	1	5.1
	Residential	731	7,238.0
	Rural	40	1,095.3
	Rural Estate	1	0.3
	Waterfront	1	0.1
Vacant Land Total		774	8,338.9

Property Class	Sub-Class	Number of Parcels	Total Acres
Unknown	Unknown	25	72.5

Town of Jewett Comprehensive Plan October 2007

2. Build-Out Analysis

A build-out analysis is an exercise designed to estimate the amount of development that can possibly occur if all developable land in a town, village, or county is fully built according to the municipality's current land use regulations. This buildout analysis uses the Town of Jewett's current land use regulations, considers environmental constraints that would limit development in certain areas, and calculates the total residential density allowed at full buildout of the Town. It does not predict when this buildout would occur, at what rate it would occur, or where it would occur first. It only predicts the possible end result.

The general steps followed to calculate full buildout conditions are:

1. Identify areas that already have residential development and therefore would not allow new development
2. Identify properties subject to conservation easements, or are owned by government entities not likely to allow development
3. Identify areas in the town having environmental constraints that would not support new residential development. These include:
 - A. Water and streams
 - B. 100 foot buffer of water and streams
 - C. Wetlands - NYSDEC, and Federal
 - D. 100 foot buffer of wetlands
 - E. Flood Hazards
 - F. Steep Slopes (over 15% grade)
4. Calculate the amount of new residential development allowed by Jewett's current land use regulations in the remaining undeveloped areas of the Town.

A geographic information system (GIS) software program was used to conduct this analysis. In essence, the analysis calculates the total land base of the town, subtracts all lands having environmental constraints and completely built areas from that land base, and then applies the town's development rules to calculate the number of allowable new residences. For purposes of this analysis, the buildout assumed that all new development will likely be single-family homes. Jewett's zoning allows two family dwellings in all districts, and multiple dwellings in the Hamlet district. However, it is assumed that this will be the exception for future development, rather than the rule.

Note that the results of all of these calculations are only estimates. The GIS layers used are not exact replicas of what is actually found in the real world, only representations of what is there. The processing of the data also introduces a certain amount of error, and can increase the inaccuracy of the data layers. The only way to get an accurate count of allowed residential uses on a particular property is to do an on-site survey of existing conditions.

Town of Jewett Comprehensive Plan October 2007

The buildout starts with the Tax Parcel data obtained from Greene County Department of Planning and Economic Development. Other GIS layers were also used, such as roads, water features, wetlands, soils, and topography. Extra information is added to the parcel data layer throughout the process.

The first step is to identify the existing land uses for each parcel. Existing residential uses are identified by using the Property Class code found in the table accompanying the GIS parcel layer. Generally, any parcel with a property class code in the 200 range is a residential use. Some commercial uses, such as mobile home parks and apartment buildings are also essentially residential uses, and were considered as residential uses for purposes of the Buildout calculations. The current residential uses are shown on the Existing Residential Use map using a small green dot placed on the parcel. The dot does not indicate the exact location of the building on the property; it only indicates there is a residential building on it. 1,179 existing residential dwelling units were identified using the GIS parcel layer.

The Zoning layer determines the allowed residential development density within each district. A column added to the parcels attribute table carries the minimum lot size for each zoning district.

Zoning District	Minimum Lot Size
Hamlet Residential	1.5 acre
Rural Residential	2.5 acres
Rural Conservation	3 acres
Conservation	5 acres

Fully built parcels were identified by using the Property Class code, calculating the total area of the parcel, and comparing it with the minimum lot size required in the district where the parcel is located. For example, an existing residence on a 9 acre parcel in the Town's Conservation district is designated as fully built. The property cannot be subdivided into two conforming 5 acre lots. Further inspection using the Aerial Photographs identified more parcels that were developed in a way that would not allow further subdivision. Houses placed in the middle of a large lot would be one example. Some intensively developed non-residential uses were removed. State owned lands, cemeteries, and churches were also removed after inspection of the aerial photos. What's left after subtracting the fully built parcels is a layer showing the buildable parcels in the municipality; parcels that can potentially be further subdivided and/or built upon.

The next step is to identify any environmental features that would constrain development. Two categories of constraints were identified. Water based constraints, which include open water, streams, and wetlands, including a 100 foot upland buffer, and flood plains comprise the first category. Slopes over 15% were included in the second category of constraints. These constraint layers were then merged together into a new layer, and used like a "cookie-cutter", removing the constraints from the already identified buildable parcels.

Town of Jewett Comprehensive Plan October 2007

The result of all of these operations is a layer showing the developable area within the remaining buildable parcels found in the town. This is the layer the final computations are performed on. The formula used is:

$((\text{Remaining developable area} \times 0.85) / \text{Minimum Lot Size}) - \text{Any Existing Residential Uses}$

The 0.85 multiplication factor is used to allow room for new roads, and any other infrastructure needs. The minimum lot size will vary according to the district each parcel is located in. Parcels that span districts are split along the district boundary into separate parcels. The final calculation provides the potential buildout for the entire town based on current zoning regulations.

Results of the Buildout Calculations

The table below shows the number of existing dwelling units in Jewett along with number of parcels, number of buildable parcels, and acreage in each zoning district.

Zoning District	Existing Dwelling Units	Number of Parcels	Number of Buildable Parcels	Acres in Each District (Does not include road right-of-ways)
Hamlet Residential	79	114	54	622
Rural Residential	828	1,300	780	12,110
Rural Conservation	247	508	348	7,407
Conservation	25	152	100	11,507
Total	1,179	2,074	1,282	31,646

Figure 1 and 2 below show the build-out analysis results. Figure 1 corresponds to the numbers included in the blue shaded column of the chart below, and Figure 2 corresponds to the numbers included in the green shaded column of the chart below.

Town of Jewett Comprehensive Plan October 2007

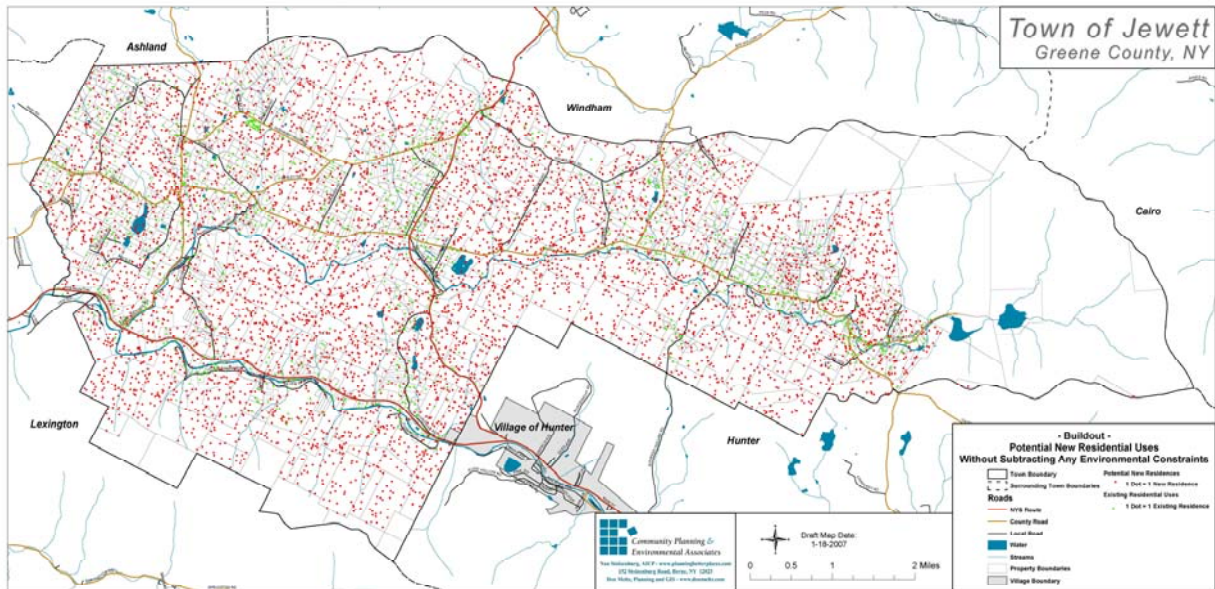


Figure 1: Build-Out Results with No Environmental Constraints Removed

Figure 2, below shows the build-out analysis results if zoning were to remove areas having environmental constraints from calculation of allowable density.

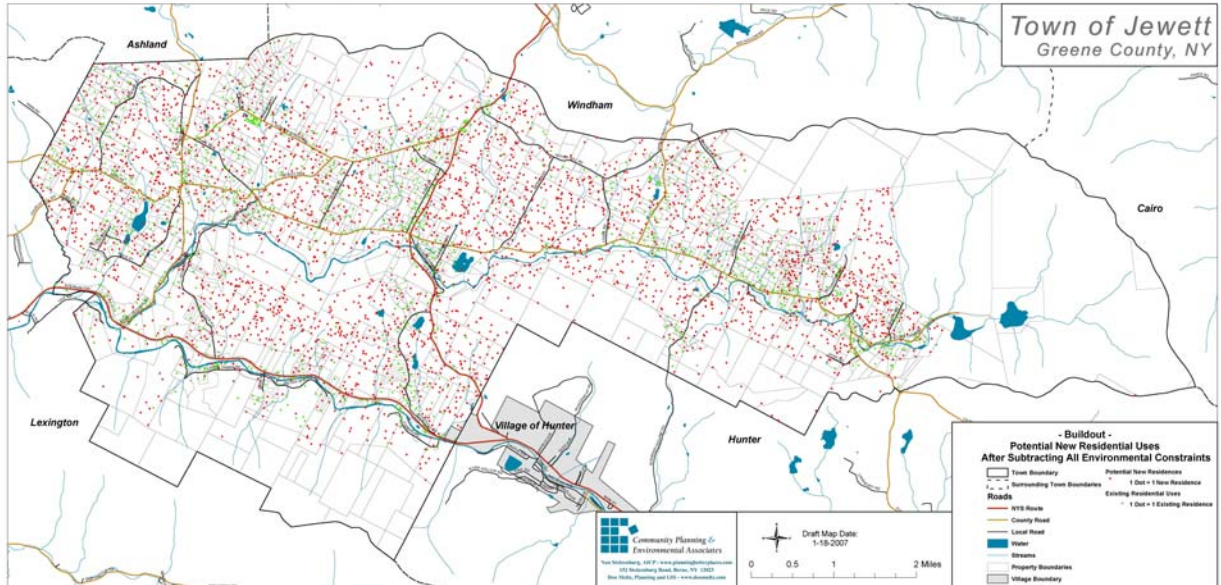


Figure 2: Build-Out Analysis Results with Removal of Environmental Constraints for Density Calculation

Town of Jewett Comprehensive Plan October 2007

Results of the Build-Out Analysis

Zoning District	Current Zoning Buildout with No Constraints Removed	Current Zoning Buildout with Water Constraints Removed	Current Zoning Buildout with Water and Slope Constraints Removed
Hamlet Residential	276	239	192
Rural Residential	3,216	2,805	2,218
Rural Conservation	1,711	1,562	631
Conservation	647	619	87
Total	5,850	5,225	3,128

Thus, the result of the analysis shows that the Town of Jewett's zoning establishes a development potential of 5,850 new dwellings. If zoning were changed to require removal of unbuildable locations within each parcel from determining the number of lots that could be created, there would be a potential of 3,128 new dwellings in Jewett.

As an example of how a change in the density allowed in the various districts might affect the potential buildout, an alternative buildout was calculated using 1.5, 5, 10, and 15 acre minimum lot sizes.

Zoning District	Lower Density Buildout with No Constraints Removed	Lower Density Buildout with Water Constraints Removed	Lower Density Buildout with Water and Slope Constraints Removed
Hamlet Residential @ 1.5 acre	276	239	192
Rural Residential @ 5 acre	1,654	1,481	1,219
Rural Conservation @ 10 acre	568	531	312
Conservation @ 15 acre	228	224	68
Total	2,726	2,475	1,791

This build-out analysis shows the change in potential development capacity town-wide and within each district if the minimum lot sizes were changed as well as what would potentially happen if environmental constraints were removed from the calculation of density on each parcel. The above build-out does not indicate when or how fast this build-out could occur at – only that it is a potential development capacity as allowed by zoning or under different zoning scenarios.

C. Demographic and Housing Profile

The data that follows comes from US Census data in 1980, 1990, and 2000. The information consists of both population and housing data. The population data is collected from year-round, permanent residents only and thus does not reflect the demographic characteristics of Jewett's second home owner population. There is no factual data available at this time to analyze the characteristics of the second home owner population. What follows is an analysis that reflects only a portion of Jewett's population.

Demographic Profile of Permanent Resident Population

Primary Demographic Issues and Features from Analysis

- Jewett permanent population is significantly older than the County and the State.
- Jewett has lost a high percentage of its young adults to outward migration.
- Jewett gained some resident families with older adults through inward migration.
- Housing construction rates far exceed projected local need of existing residents.
- Home ownership is relatively unaffordable in Jewett (using national definitions of affordability and as compared to regional conditions).
- A very high share (52%) of Jewett's housing stock is for seasonal use.
- Jewett's housing stock is not diverse (90% single-family) and has become less so since 1980.

Current & Past Population Characteristics

Demographic data for this population analysis in Jewett was drawn from US Census Data from 1980, 1990, and 2000. This is the best data available for the permanent population. The data may not account for very recent trends and shifts because we are more than half-way through the decade and the next census year is 2010.

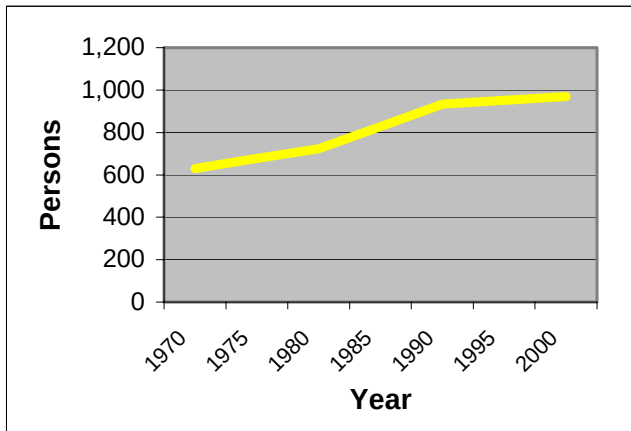
Population projections were carried out using birth, death, and fertility calculations for each resident population age group in Jewett. Since a population projection using only these factors does not take into account movement in and out of Town, the projection was also done to include an estimate of "migration" using 1990 to 2000 data as a base.

The Town has a sparse, rural population density of 19.3 persons per square mile. As of 2000, the Town had about 80 acres per household. The number of dwellings per acre as of 2000 was 31.4.

As of the 2000 Census, the Town of Jewett had 970 individuals and 405 households of year-round residents. This population comprised 2.0% of the total Greene County population. Chart 1 below shows the community growth curve for the thirty years between 1970 and 2000. In 1970 the population was 630 persons and Jewett grew in each subsequent decade. The fastest 10-year growth rate was in the 1980's (29%) which then slowed to 4% through the 90's.

Town of Jewett Comprehensive Plan October 2007

Chart 1: Town of Jewett Past Population



The median age of the permanent population in 2000 was 44.2 years old, nearly seven years older than the statewide median age of 37.5 years. About 18% of the population was over 65 years of age compared to about 16% and 12% for New York State and the U.S. respectively.

The Town has a very large number (539) of seasonal / recreational / occasional use housing units, representing over half of all housing units in Jewett and about 9.1% of the total number of seasonal / recreational units in Greene County. Local officials indicate that these homes are owned primarily by full-time residents of the tri-state New York City metropolitan area along with residents of the Capital District, western Massachusetts and Connecticut. On the weekends and during summers and holidays, the local population and traffic volume rises and could potentially grow to twice its regular levels.

Population Age Structure

Charts 2 and 3 show that the age structure of the Town of Jewett has changed significantly over the past two decades. Between 1980 and 2000, the population rose in most age categories at about the same rate. In 2000, the number of year-round residents aged 19 to 29 years dropped dramatically from back to 1980 levels. The number of mid-aged persons increased dramatically from past decades. During these 20 years, the school age population rose somewhat, but held relatively constant as a share of the total population. The share of infants and young children as a portion of the total population dropped significantly between 1980 and 2000. Chart 2 and 3 show peaks of young, school-aged children and mid-age “boomers” that, in the next decade, will move into the senior citizen age groups. The surge in this age category is partly due to the relatively larger ‘baby boom’ cohort getting older as well as the arrival of new residents in this age category.

Town of Jewett Comprehensive Plan October 2007

Chart 2: Town of Jewett Past Age Profile (Persons by Age)

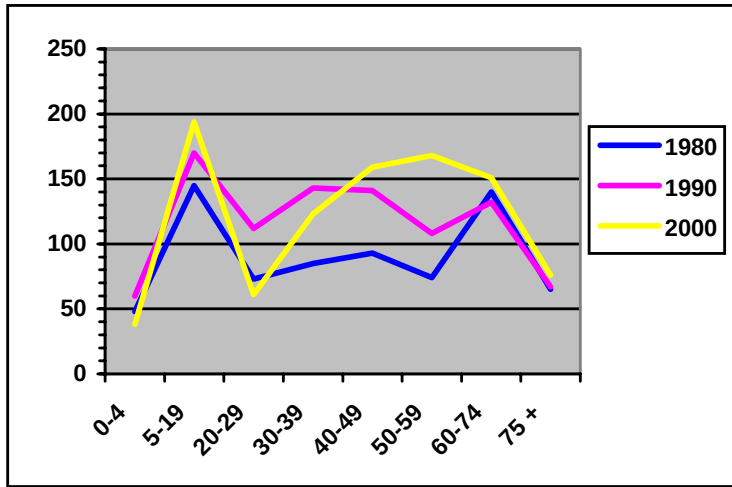
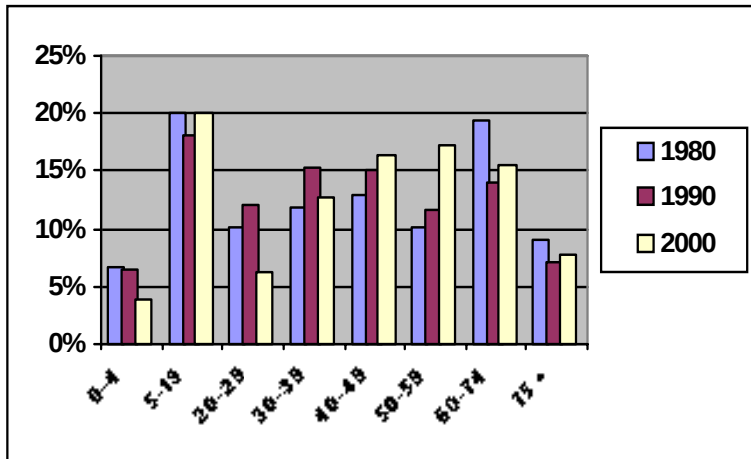


Chart 3: Town of Jewett Past Age Profile (Percent of Population by Age)



Births & Deaths (Natural Increase)

Jewett is a community with a median age well above that for NY State. It has a large part of its population in the baby boomer and older group. With no migration of new people to Jewett, it is likely that the resident population would decline.

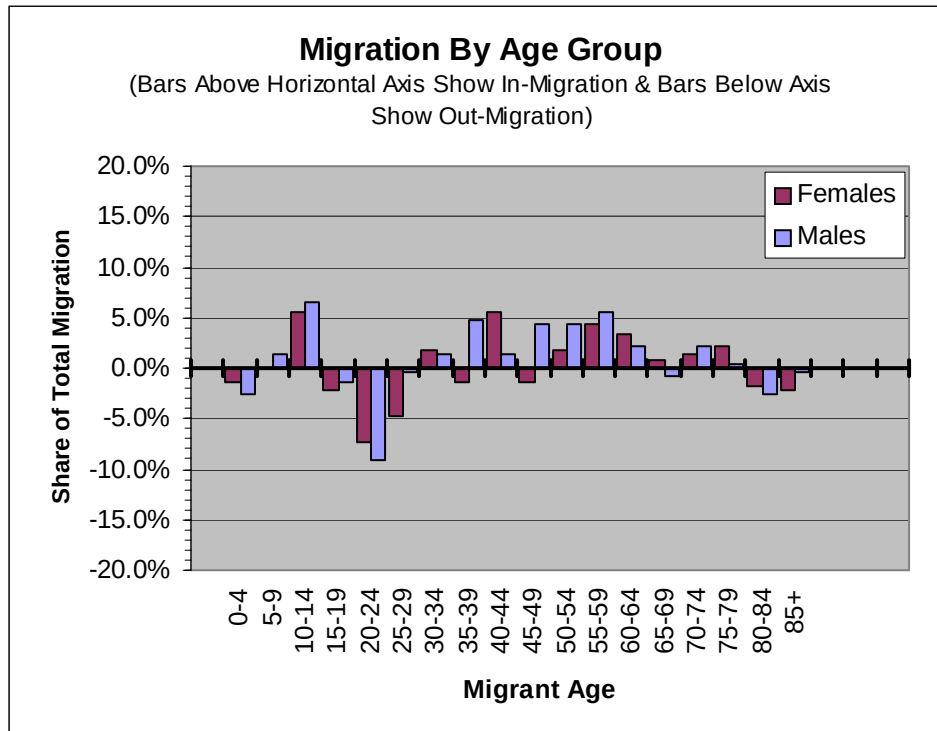
Migration

In a highly mobile society, migration effects are as important as natural increase to community growth. Chart 4 below shows the estimated migration pattern for the Jewett based on changes between the 1990 and 2000 Census. The bars indicate the relative share that each age group contributed to the total migration (in and out) during a five-year period. Bars on the bottom (negative) side of the horizontal axis represent outward migration and bars above (positive) of the horizontal axis represent inward migration.

Town of Jewett Comprehensive Plan October 2007

This chart represents migration in and out of Jewett of full-time residents and shows that Jewett experienced a lot inward migration across many age groups, particularly among adults between 35 and 64 years of age. However, the migration into Jewett was offset by significant migration of people out of Jewett among twenty-year olds and to a small extent among seniors over 80 years. There was also a large number of people in the 10-14 age group that moved into Town, indicating that a substantial portion of new arrivals in Jewett were part of families with children.

Chart 4: Town of Jewett Migration Profile



The migration estimate indicates that during the 1990s Jewett lost about 91 full time residents (10% of 1990 population) while it gained about 141 (15% of 1990 population) for a net gain of 50 persons (5% of 1990 population) over the decade. During the same ten years, Jewett gained 33 households. New households appear to be slightly smaller than those departing, contributing to the Town's lower average household size.

Housing Growth & Sprawl

Upstate NY experienced a marked trend in the 1990s, which has been termed sprawl without growth. The region's overall population held relatively constant or even declined, while construction in rural areas occurred at high rates and populations and housing stock in formerly populous urban centers declined.

Jewett was part of this trend and has some other unique changes. Through the 1990s it experienced a 9% growth in households and a 7% rise in total housing units while the total population rose by a smaller 4%. The number of seasonal units increased 14%

Town of Jewett Comprehensive Plan October 2007

during the 90's. A close examination of the data shows that almost the entire increase in housing units were of seasonal dwellings (year-round dwellings went from 485 to 487).

These growth rates were even higher during the 1980s when Jewett experienced a true housing boom. The Town experienced an almost 40% growth in the total number of units and about a 30% rise in population and households. The steep slopes in the housing trend lines shown toward the left side of Chart 5 below clearly depict this local surge.

Chart 5: Town of Jewett Housing Growth

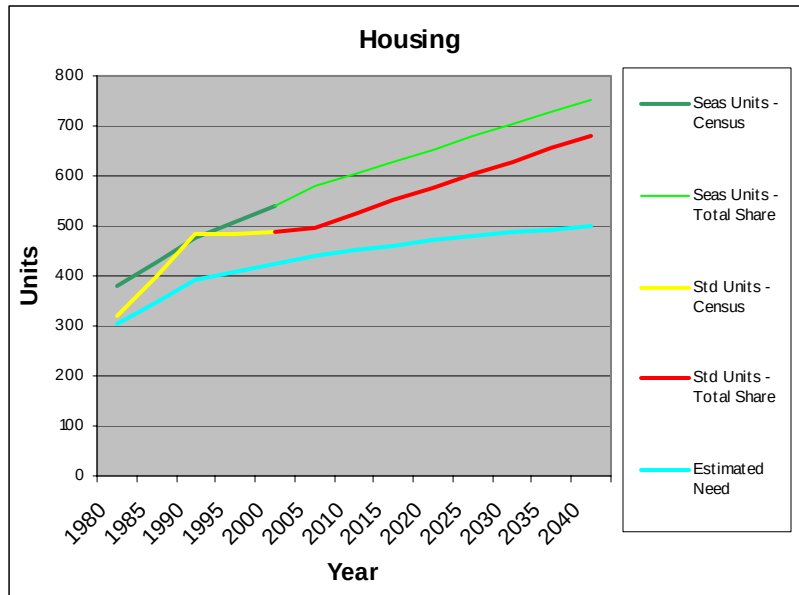


Chart 5 above uses recent building-permit (shown in Table 1 below) and past census data trends to predict future levels for both seasonal and 'standard' housing units. Despite a surge in the 1980's in non-seasonal housing construction, seasonal units are the dominant type in the town, whereas most communities have only a small percentage. Non-seasonal housing did not grow at all during the 1990's, probably owing to a large pool of vacant units built speculatively and marketed primarily for seasonal use.

The blue 'Estimated Need' trend line in Chart 5 represents the number of full-time households counted or predicted within Jewett plus a 'reasonable' vacancy allowance of 5%. Any quantity of housing above this line is 'surplus' that does not meet the actual or projected need of the year-round community in that year. It is clear that Jewett has and will have an abundant surplus of housing.

The estimated number of building permits issued (based on post-2000 data) in Jewett is currently about 180 units every 10 years with a rough completion/conversion rate to net new housing of approximately 65%. The chart clearly shows that the number of both seasonal and 'standard' housing units is expected to increase at a rate far above the trend for household growth. Seasonal unit levels are expected to increase at roughly a 7.5% rate every ten years, while 'standard' units (after an initial slow period) are expected to increase at about 8.5% every ten years until 2040.

Town of Jewett Comprehensive Plan October 2007

It is clear from the large gap between the blue line and the 'standard' housing supply trend line that the rate of new housing construction has well exceeded permanent residential population growth in the Town of Jewett since 1985. The vacancy rate for all non-seasonal units was only 4% in 1980, but it grew to 11% and 8% in 1990 and 2000, close to the values found in the Town of Hunter.

Table 1: Building Permits & Subdivisions: Town of Jewett

Year	# New Single-Family Units	# New Multi-Family Units	# Major Subdivisions	# Minor Subdivisions***
1986*	76	2		
1987*	37	4		
1988*	45			
1989*	33	14		
1990*	26	12		
1991*	14	2		
1992*	16	2		
1993*	4			
1994*	10			
1995*	9			
1996*	4			
1997*	7			
1998*	8			
1999*	8		1	
2000*	12			4
2001*	15			4
2002*	16			3
2003**	12			7
2004**	20			5
2005**	26		1	7
2006**	14			5

*Reported by Capital District Regional Planning Commission

** Building Permit Data reported by the Town of Jewett Building Inspector

***Subdivision Data reported by the Town of Jewett Planning Board Secretary

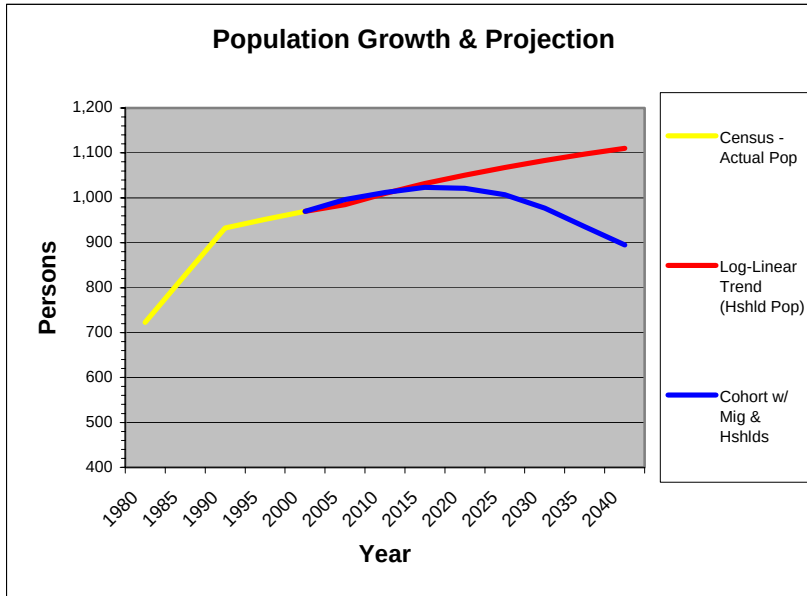
Future Population Growth

The bottom trend line in blue in Chart 6 below illustrates the projected combined effects of natural increase, migration, and sprawl on Jewett's future population. It predicts a full-time resident population of 1,023 persons by 2015. However, after this point the population is expected to decline with continued departure of young adults and the aging of an older than average population.

Migration trends will probably shift, and new housing once built does tend to remain occupied so the dip in the population will likely be smaller than that shown. The higher trend line shown in red represents the projection of household population growth that does not take into account the local age structure and dynamics of population growth. It is difficult to predict what portion of the seasonal population will convert to being permanent. This could significantly impact the potential future population of Jewett.

Town of Jewett Comprehensive Plan October 2007

Chart 6: Town of Jewett Population Projection



Town of Jewett Comprehensive Plan October 2007

Table 2: Selected Jewett Demographic Characteristics (1980 – 2000)

Subject	1980	1990	2000	Percent Change or Shift 1990-2000
Population and Age				
Total Population	723	933	970	4.0%
Median Age	41.3	38.8	44.2	5.4
Percent Population ≥ 65 Years	21.7%	16.7%	17.6%	0.9
Percent Population ≤ 18 Years	17.1%	15.9%	18.1%	2.2
Households and Families				
Number of Households	289	372	405	8.9%
Families	205	266	280	5.3%
Married Couple Families	183	242	241	-0.4%
Single Householder Families	12	24	39	62.5%
Average Household size	2.50	2.51	2.40	-4.5%
Housing Characteristics				
Median Year Structure Built	NA	1968	1972	4
Number of Total Dwelling Units	699	960	1,026	6.9%
Number of Seasonal Units	380	475	539	13.5%
Housing Tenure				
# Owner-occupied	234	302	319	5.6%
# Renter-occupied	55	70	86	22.9%
# Vacant - Recreational / Seasonal	380	475	539	13.5%
# Vacant - For Sale / Rent / Other	16	63	47	-25.4%
Units In Structure				
Single Family Units	74.4%	84.2%	89.8%	5.6
Multi Family Units	8.8%	5.2%	3.2%	-2.0
Mobile Home or Trailer	7.3%	10.6%	7.0%	-3.6
Median Gross Rent	NA	\$425	\$582	36.9%
Rent Budget Index (affordable ≤ 1)		0.59	0.57	-0.02
Median Home Value	NA	\$129,400	\$120,300	-7.0%
Home Cost Index (affordable ≤ 2)		4.5	2.9	-1.5
Residency				
Location 5 Years Ago (Share of Pop)				
Lived in same house	NA	64.5%	63.0%	-1.5
Lived in other house, same county	NA	19.8%	13.6%	-6.1
Lived in other county, same state	NA	8.6%	16.0%	7.4
Lived in other state	NA	7.1%	6.5%	-0.6
Lived in other country	NA	0.0%	0.9%	0.9
Recent Arrivals (Moved In Past 10-Yrs)				
Share of All Households	NA	50.6%	48.6%	-1.9
Educational Attainment				
< 9 th grade	NA	5.4%	2.9%	-2.5
Attended HS - incomplete	NA	10.9%	10.3%	-0.6
Attended HS – diploma / GED	NA	33.2%	29.5%	-3.7
Some college	NA	14.6%	20.5%	5.8
Associates Degree	NA	6.9%	5.7%	-1.2
Bachelor's Degree	NA	17.8%	17.0%	-0.8
Advanced Degree	NA	11.2%	14.1%	2.9

Town of Jewett Comprehensive Plan October 2007

Subject	1980	1990	2000	Percent Change or Shift 1990-2000
Location of Work				
Same town / village	NA	17.6%	19.2%	1.6
Same county different town / village	NA	58.5%	52.6%	-6.0
Different county	NA	22.1%	25.7%	3.6
Different state	NA	1.8%	2.6%	0.8
Average time commuting (minutes)	NA	28.2	30.0	1.8
Labor Force				
Size of labor force	NA	437	465	6.4%
Labor force participation rate	NA	58.0%	60.3%	2.3
Unemployment rate	NA	8.5%	6.0%	-2.4
Female share of labor force	NA	40.5%	42.4%	1.9
Employment Sectors				
Total Employed	NA	400	437	9.3%
<u>Sector Share of Total</u>				
Agriculture, forestry, & mining	NA	3.0%	1.6%	-1.4
Construction	NA	12.3%	11.2%	-1.0
Manufacturing	NA	4.3%	6.2%	1.9
Wholesale trade	NA	4.0%	2.7%	-1.3
Retail trade	NA	19.0%	8.9%	-10.1
Finance, insurance, real estate	NA	5.3%	3.2%	-2.0
Transportation, comm., utilities	NA	6.3%	6.9%	0.6
Public administration	NA	2.8%	4.3%	1.6
Services	NA	43.3%	54.9%	11.7
Income				
Median Household Income	NA	\$28,942	\$41,172	42.3%
Incomes Ratio (Avg/Mdn - NYS: 1.34, 1.43, 0.09)		1.26	1.32	0.06
Median Family Income	NA	\$32,917	\$46,250	40.5%
Incomes Ratio (Avg/Mdn - NYS: 1.28, 1.36, 0.08)		1.33	1.36	0.04
Per Capita Income	NA	\$14,598	\$22,440	53.7%
<u>Share of Households:</u>				
With self-employment income	NA	26.3%	32.7%	6.4
With Social Security Income	NA	36.8%	36.1%	-0.7
With Retirement Income	NA	26.6%	23.3%	-3.3
With Public Assistance Income	NA	4.4%	2.5%	-2.0
Share of families below poverty level	NA	2.7%	8.1%	5.4
Share of individuals below poverty level	NA	5.0%	12.0%	7.0
Share of seniors below poverty level	NA	9.2%	6.4%	-2.8

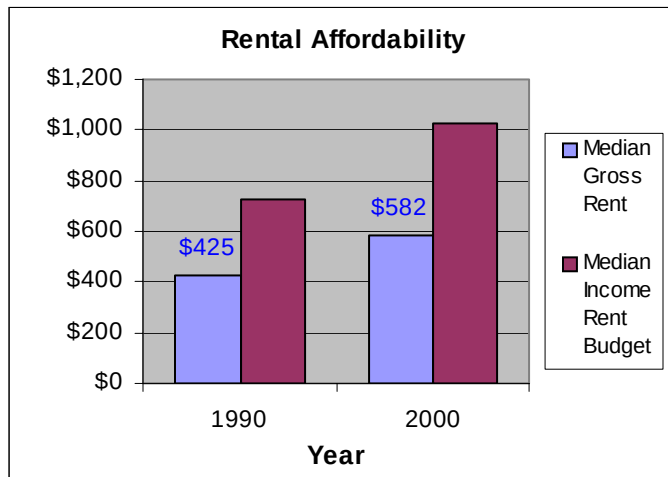
Town of Jewett Comprehensive Plan October 2007

Housing Affordability

There are several ways to determine if housing is generally affordable in a community. One method is to determine the “rental index.” This index shows the maximum gross rent a given household can afford. Affordable rental housing is generally considered to be no more than 30% of a household’s monthly income. The average monthly rental rate in Jewett in 2000 was \$582 (2000 is the most recent available information on rental rates: This rate may not be current with 2006 rental rates). The median household income was \$41,172. This divides to \$3,431 of monthly income. Thirty percent of this is \$1,029, which means that the average household could afford \$1,029 per month in rent.

The average monthly rent is just above half (0.57) of this amount and would be considered affordable. Thus, rentals in 2000 were affordable in Jewett. Chart 12 below graphically demonstrates the surplus rental budget available to the median income household. This surplus indicates that renting is affordable to many households.

Chart 7: Comparison of Median Gross Rent with Monthly Rental Budget for a Median Income



Another method to determine housing affordability is to look at the ratio between the median value of a single-family house and median household income. Nationally, a ratio of 2 or less is considered to be affordable. The affordability ratio for Jewett in 2000 was \$120,300 (median value of homes) divided by \$41,172 (median household income), or 2.9. This figure is above the desired ratio of two and indicates that many families in Jewett would find purchasing a home financially challenging, though this affordability index was even higher at 4.5 in 1990.

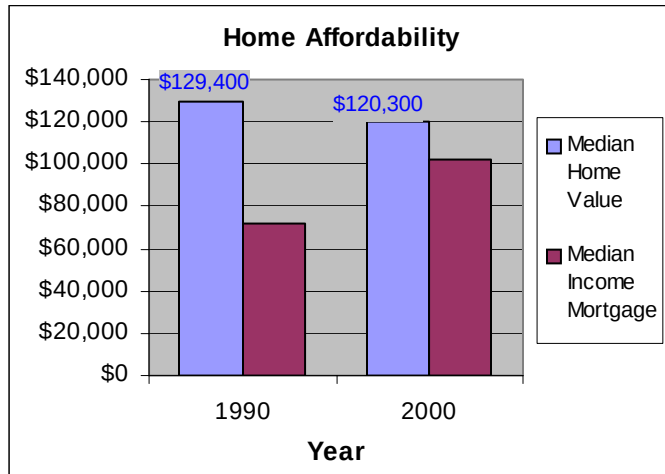
Finally, the purchase price multiplier is another method that also gives an indication of affordability. This looks at the maximum mortgage approval amount likely to be given to potential homebuyers. This is usually about 2.25 times annual income. The calculation below shows this multiplier plus a 10% down payment. The result is the amount of money that would be able to be afforded for a mortgage by the median income household:

Town of Jewett Comprehensive Plan October 2007

$$2.25 \times \$41,172 = \$92,637 + 10\% \text{ down payment} \rightarrow \$101,901$$

This means that households with a median income would be able to afford a \$101,901 dollar house. Since the median value of a house in the area was \$120,300, fewer than half of the Town's households would find purchasing a home affordable, though as with rents affordability has improved since 1990. Chart 13 graphically represents the relationship. During the 1990s, the median home value declined by 7%, while the median household income rose by 42% putting home ownership within reach of more of the Town's households.

Chart 8: Comparison of Median Home Value with the Mortgage for a Median Income



Community Comparison Tables

Table 3: Historic Population Change - Comparison with Other Municipalities

Municipality	1980 Census	1980-1990 Growth	1990 Census	1990-2000 Growth	2000 Census
Town of Jewett	723	29.0%	933	4.0%	970
Town of Ashland	744	7.9%	803	-6.4%	752
Town of Hunter	2,252	-6.0%	2,116	28.6%	2,412
Town of Shandaken, Ulster County	NA	NA	3009	9.6%	3,299
Greene County	40,861	9.5%	44,739	7.7%	48,195

*Source: U.S. Census Data

Town of Jewett Comprehensive Plan October 2007

Table 4: Projected Population Change - Comparison with Other Municipalities

Municipality	2010 Projected	2020 Projected	2000-2020 % Change	2030 Projected	2040 Projected	2020-2040 % Change
Town of Jewett	1,010	1,051	8.4%	1,083	1,110	5.6%
Town of Ashland	733	737	-2.0%	739	741	0.5%
Town of Hunter	2,813	2,841	17.8%	2,862	2,880	1.4%
Greene County	49,493	50,184	4.1%	50,736	51,195	2.0%

Table 5: Demographic Comparison of Area Municipalities

<u>Community Characteristic</u>	<u>Jewett</u>	Ashland	Town of Hunter	Town of Shandaken, Ulster County	Greene County
Median Age (2000)	44.2	41.5	41.1	45.0	39.0
Change In Median Age (1990-2000)	5.4	4.2	1.5	NA	3.5
<u>Percent population aged over 65 years (2000)</u>	17.6%	16.6%	16.2%	19.5	15.7%
Percent population aged over 65 years (2020)	31.6%	28.2%	24.2%	NA	22.4%
Percent population of school age (2000)	18.1%	18.7%	19.7%	17.4	17.9%
Percent increase in housing units (1990 – 2000)	6.9%	5.4%	-6.6%	4.4	6.2%
Percent increase in # households (1990 – 2000)	8.9%	-2.3%	13.1%	14.3	10.0%

Town of Jewett Comprehensive Plan October 2007

<u>Median household income (2000)</u>	\$41,172	\$35,357	\$33,382	\$31,566	\$36,493
<u>Percent of population below poverty line (2000)</u>	12.0%	16.0%	19.4%	12.3%	11.3%
<u>Median gross rent / month (2000)</u>	\$582	\$550	\$511	\$573	\$508
<u>Median value of home (2000)</u>	\$120,300	\$91,800	\$96,900	\$91,200	\$92,400
<u>Percent of housing stock in single-family units (2000)</u>	89.8%	79.2%	69.5%	83.7%	71.5%
<u>Percent of housing stock in multi-family units (2000)</u>	3.2%	4.0%	26.5%	7.6%	17.2%
<u>Percent of housing stock in mobile homes (2000)</u>	7.0%	16.8%	4.0%	8.2%	11.3%
<u>Percent of housing stock for seasonal / occasional use (2000)</u>	52.5%	42.5%	47.6%	65.5%	22.4%
<u>Percent of housing stock vacant (2000)</u>	4.6%	4.1%	2.7%	45.3%	3.6%

*Census and projection data source: U.S. Census

Town of Jewett Comprehensive Plan October 2007

Community Comparisons

Demographic characteristics were compiled for the Greene County towns of Hunter and Ashland, the Town of Shandaken in Ulster County, and Greene County itself for comparison with Jewett. These comparison values are listed in tables 3, 4 and 5 above.

Table 3 shows almost all these communities grew in the 1980s and 1990s except for a decline in Hunter and Ashland in the 80's and 90's respectively. Jewett grew the fastest in the 80's nearly 20% above the high 9% rate experienced in Greene County as a whole. In the 90's Jewett's growth was among the slowest, about half that in Greene County. Hunter rebounded in the 90's with a rate nearly equal to Jewett's in the prior decade.

Future growth based on a log trend of household population (Table 4) puts Jewett in the middle of the pack for growth rate between 2000 and 2020, while it leads the group of communities between 2020 and 2040.

Table 5 shows Shandaken had the oldest population with Jewett a close second. Jewett has the oldest population among the group and grew older the fastest between census years. In 2000, Shandaken and Jewett also had the largest share of population over 65 years of age and this is projected to remain the case through 2020 at a level (32%) significantly higher than the other communities. However, the share of its population of school age in 2000 was at a comparable level to the other communities.

During the 1990s, Jewett had the highest growth in housing stock, though at a level about comparable to the other communities and close to that for Greene County but two percentage points higher than Shandaken. Here again the disparity between population and housing units is seen. Additionally, Jewett had a lower rate of increase in the number of households than other communities and the County.

Jewett is among the wealthier of the comparison geographies with the highest median income and the second lowest poverty rate as of 2000. Jewett's wealth is also reflected in its rent and home costs which were the highest of the group, particularly among home values.

Jewett had the highest share of its housing in single-family units and the second-lowest share of multi-family units. Especially compared to nearby Hunter, the Town's share of mobile home units was in the middle of the comparison group. Overall this would indicate that Jewett has the least diverse housing stock.

Jewett had the second highest share of units for seasonal use, but at very similar levels to these other mountaintop towns. It's percentage of vacant year-round units was also the highest of the group, though at a similar level to Hunter and Greene County with Shandaken having an excessive vacancy rate of 45.3%.

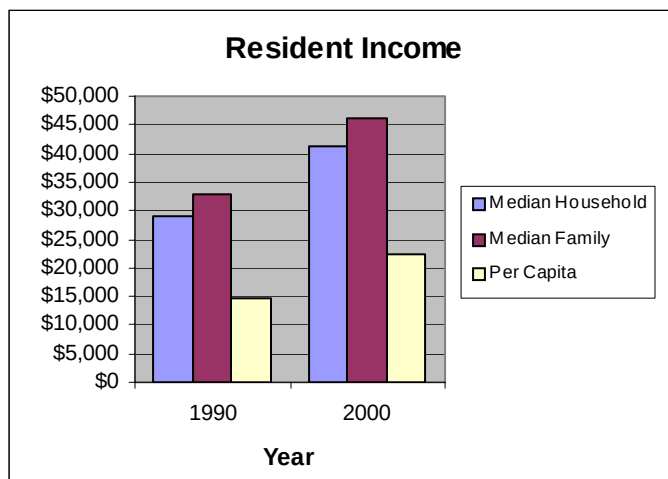
D. Economy

Income

As of 2000 Jewett had about 60% of its eligible population within the labor force, which was about the same as New York State as a whole. Jewett females enter the workforce at a lower rate (42% versus 55%) than in the State as a whole. The town had an unemployment rate of 6% in 2000, which was higher than New York State's 4%, but about the same as Greene County.

Chart 9 below shows that incomes rose fairly strongly in Jewett between census years. Jewett's median household income in 2000 was about \$2,000 lower than for New York State, but about \$5,000 more than for Greene County households. Both median household and median family incomes rose 10% more in Jewett than in Greene County between 1990 and 2000, though per-capita income rose only 5% more than Greene County.

Chart 9: Town of Jewett Census Income Profile



Income distribution and inequality in a community is an important indication of potential issues and needs in a community. It can be very roughly estimated by dividing the average by the median for a particular income measure (household, family, or per-capita). The average income will always be higher than the median so this 'Income Inequality Ratio' will always be greater than one. The degree to which it is higher along with comparison to other geographic areas will indicate the level of income inequality in the community.

In 1990, Jewett had a Household Income Inequality Ratio of 1.26 while the values for Greene County and New York State were 1.20 and 1.34 respectively. By the 2000 Census Jewett's household income ratio had risen (more unequal income distribution) by 0.06 to 1.32. Greene County and New York State's household income ratios had also risen by a slightly higher (0.09) amount to 1.29 and 1.43 respectively. The Income Inequality Ratio for the median family in Jewett rose a slight 0.04 from 1.33 to 1.36

Town of Jewett Comprehensive Plan October 2007

between 1990 and 2000. This same metric rose more strongly (0.07 shift) in Greene County from 1.16 to 1.22 while NY State's rose about the same amount (0.08 shift) from 1.28 to 1.36 during the 1990's.

The 1990 inequality values indicate that within Greene County Jewett had attracted more high-earning households and families than other parts of the county along with the departure of many lower fixed-income households. According to local officials, this trend has continued and increased after September 11, 2001 when a surge was noticed regionally in the purchase of weekend homes among New York City residents seeking safer family environments. There is a perception among some local officials that lower income local residents are being 'priced out' of continuing to live affordably in Jewett.

Income inequality was greater in both census years for households and families within New York State as a whole than in both the town and the county. Between the 1990 and 2000 Census, inequality in Greene County rose by about the same rate as in New York State, while the inequality ratio in Jewett rose by about half the rate in Greene County and NY State.

Employment

In 2000 about half of those employed in Jewett worked within Greene County, but outside of the town. As of the 2000 Census about 8% (37 persons) of town residents worked from home. Including this home occupation group, only about 19% of employed Jewett residents (83 persons) worked within the town, while in Greene County 31% of residents worked within the municipality where they lived

The low level of local employment is not surprising given that the Census Bureau estimated that zip codes 12444 and 12424 together had only 11 business establishments (4 of which were construction firms). According to the 2004 Census data, these businesses had from 38 to 100 employees. Only one of these firms employed a sizeable workforce between 20 and 50 employees. Two firms employed 5-9 persons and eight of the eleven firms employed 1-4 persons. Jewett does not appear have a strong local economic base, particularly compared to the ski resort communities and local commercial centers of Hunter and Windham.

Charts 10 and 11 below detail the industrial sectors within which Jewett residents were employed as of the 1990 and 2000 Census. In 2000, over half of employed residents worked in a service industry, while this value was about 40% for Greene County as a whole.

Town of Jewett Comprehensive Plan October 2007

Chart 10: Town of Jewett Employment Profile (US Census)

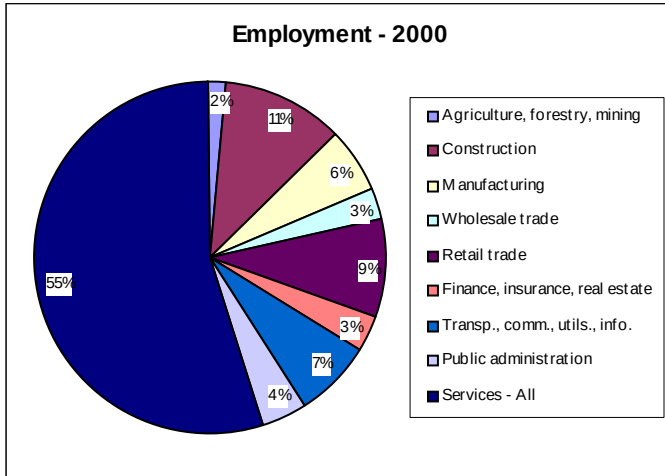
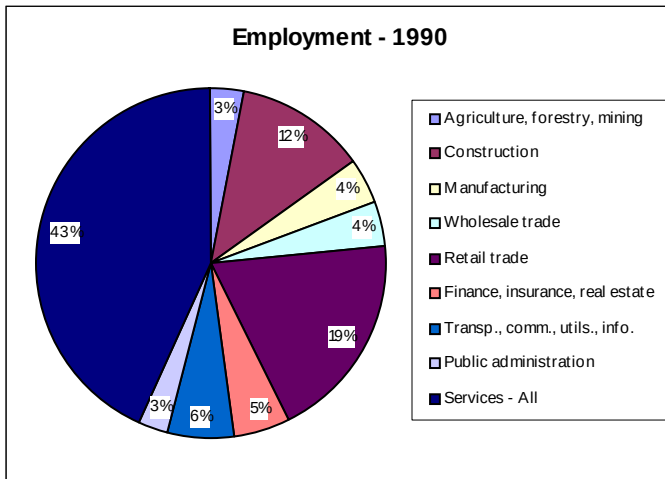


Chart 11: Town of Jewett Employment Profile (US Census)



Construction was the second highest sector for employment with about 11% of the Jewett workforce in this industry, a higher value than for employed County residents.

Agriculture / forestry declined as an employment sector between the census years much more sharply than the county as a whole (by about half its 1990 share of total employed Jewett labor force) and were the smallest employment sector in 2000 for town residents.

Employment in the sectors of manufacturing, wholesale trade, retail trade, finance, and transportation for employed Jewett residents were at comparable levels to Greene County, though generally with slightly smaller shares. Interestingly, employment in the manufacturing sector rose slightly among town residents, while it declined in the county as a whole.

E. Municipal Resources

1. Local Government

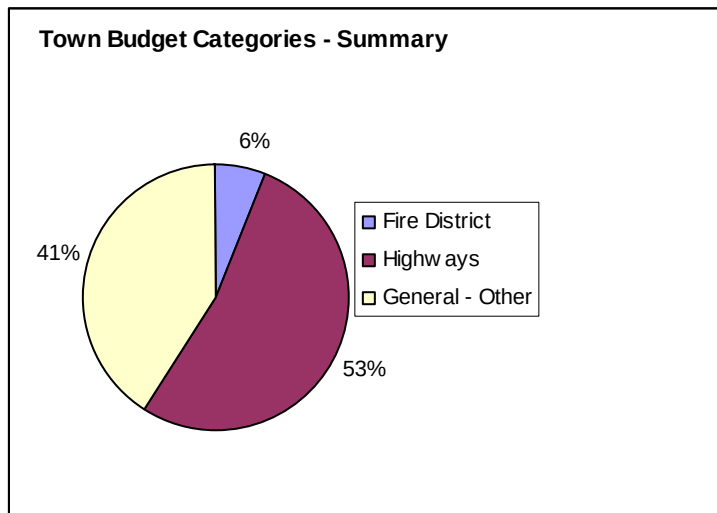
A 5 member Town Board is the official governing body of the Town of Jewett. Monthly meetings of the board are held at 7:00pm on the 2nd Wednesday of each month. The Board consists of four at-large members elected to overlapping four-year terms. The Town Supervisor serves as the fifth Town Board member

The Town Supervisor handles day-to-day management with support from a part-time assistant. Other Town staff persons include a building inspector and code enforcement officer. Elected Town offices include the Superintendent of Highways, Town Board, and Clerk/Tax Collector. The Town also has two elected justices, assisted by a court clerk. The Town has an appointed Attorney, Assessor, Dog Warden, and Health Officer, as well as Planning Board and Zoning Board of Appeals.

Town Budget

The proposed Town of Jewett budget appropriations for fiscal year 2007 total \$897,429. Estimated non-tax revenues were \$168,079 and estimated tax receipts were \$629,350. In 2007 Jewett budgeted a 'reserve fund' of \$100,000 or about 10% of total expenditures for contingencies consistent with past levels.

Chart 1: 2006-2007 Jewett Budget



About 41% of total Town spending is through the general fund. Highway maintenance comprises the largest portion of the total budget at 53%. With no water and sewer service, the East Jewett and Jewett Fire Districts are the only special funding districts and comprise about 6% of the Town budget.

Town of Jewett Comprehensive Plan October 2007

Jewett's total budget grew by 40% since 2001 and by 4% since the prior fiscal year. Taxes have risen at a slower 25% rate, while other revenue sources have grown by over 100% during the same period. The largest portion of the Town budget, highways, grew the most at 55% while the general and fire district budgets grew by 24% and 17% during these 6 years.

The current tax rates are Town - \$2.63 / thousand dollars of assessed value, Hunter-Tannersville School District - \$10.18 / thousand, Windham-Ashland-Jewett School District - \$7.68 / thousand and Greene County - \$4.40 / thousand. The Town of Jewett has passed several local property tax exemptions for senior citizens with limited incomes, disabled citizens with limited incomes, and veterans of all incomes.

The Town has no outstanding bonds or loans requiring debt service allocations. The Town has been contributing funding annually (amount varies) to the Future of Jewett Reserve Account, a capital improvements reserve account, which had a 2006 balance of \$225,000. Recent grant funding awarded to the Town includes \$30,000 from the Catskill Watershed Corp. and \$20,000 from the NYS Department of State for watershed master planning and zoning.

Land Use Regulations

Current Land Use Related Regulations in the Town of Jewett

Ordinance / Code / Resolution	Last Adopted or Updated
Comprehensive Plan	Under Development
Zoning	2001
Subdivision	2001
Site Plan Review	1991
Major Development Review Fee	No
Building Code	Enforce NYS Code
Mobile Homes	2001 (under zoning)
Unsafe Buildings	2000
Historic Districts	No
Architectural Standards / Review	No
Street & Sidewalk Standards	2001 (under subdivision)
Telecommunications Towers	1999
Signage Control	2005 (being revised)
Property Maintenance Standards	No
Junkyard / Junk Control	1973
Dump Control	NYS Catskill Park Reg's
Abandoned Vehicle Control	(under Junk Ordinance)
Adult Uses	Under Review
Noise	2005
Dog Control (Leash Law)	1998
Approved Local Waterfront Revitalization Program	N/A
New York City Watershed Regulations	1997

Town of Jewett Comprehensive Plan October 2007

2. Schools

The Town of Jewett is part of two school districts, Windham-Ashland-Jewett and Hunter-Tannersville. The area of the Town is roughly divided between the districts, though the more populous areas lie in the Windham-Ashland-Jewett district.

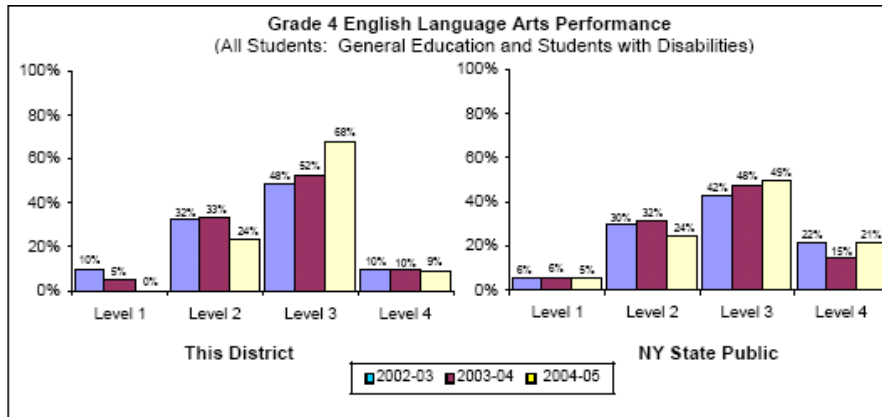
The Windham-Ashland-Jewett district has one school, the Windham Ashland Central School, located in the Village of Windham. This school houses all grades K-12. Enrollment during the 2004-2005 school year was 468 students, a slight drop of about 50 students from the previous two years. The Hunter-Tannersville school district had a total enrollment of 528 during the 2004-2005 school year, about the same as the previous two years. It has two schools, Hunter Elementary and Hunter-Tannersville Middle School / High School. The elementary school includes grades K-6 with an enrollment of 273 students. It is located in the Village of Hunter. The combined Middle School / High School covering grades 7-12 had a 2004-2005 enrollment of 275 students and is located in the Village of Tannersville.

The chart below compares the two school districts with each other and with school data from New York State.

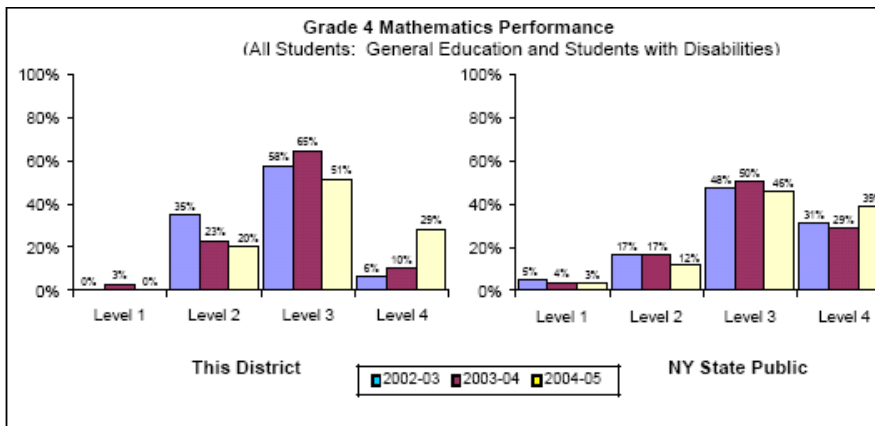
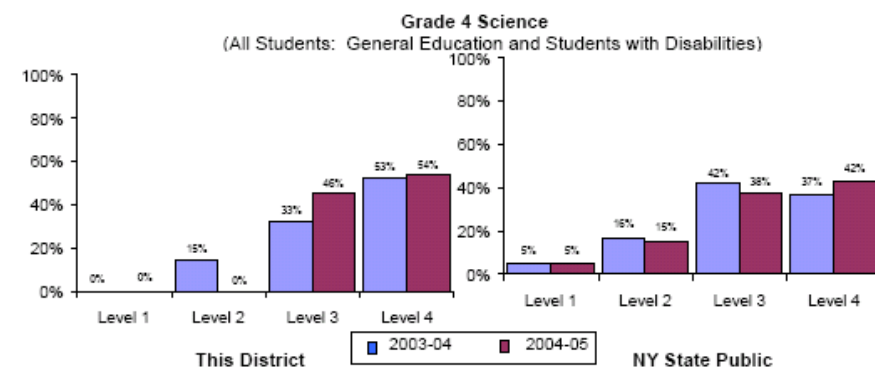
2004-2005 Windham-Ashland-Jewett Central School Statistics & Comparison

2004-2005 Category	Windham-Ashland-Jewett	Hunter-Tannersville	State
Teachers	52	50	
Masters Degree	74%	89%	79 %
Avg. Years Teaching	26 years	11 years	14 years
First Year Teachers	0%	4%	5 %
Pupils			
Students Per Teacher	10	12	14
Special Education	16.8%	12.7%	12.2 %
Expenditures per Pupil	\$14,695	\$17,996	\$13,826
Annual Attendance Rate			
All Grade Levels	96.8%	94.1%	93 %
High School			93 %
HS Graduation Rate	96%	93%	77 %
% Regents Diplomas (HS)	86%	93%	70%
Post-Secondary Plans			
Attend 4-Yr. College	63%	55%	52%
Attend 2-Yr. College	23%	24%	28%
Student Suspension Rate	8.2%	5.9%	4.8%
Dropout Rate (HS)	2.1%	2.5%	4.5%
Subsidized Lunch Eligible	24%	33%	28 %

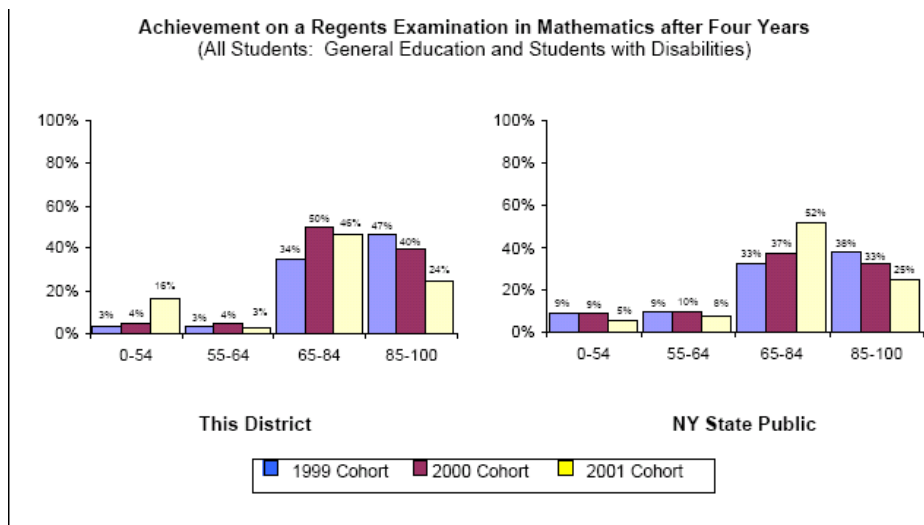
Town of Jewett Comprehensive Plan October 2007



The following charts show the performance levels of the Windham-Ashland-Jewett Central School District for elementary testing.

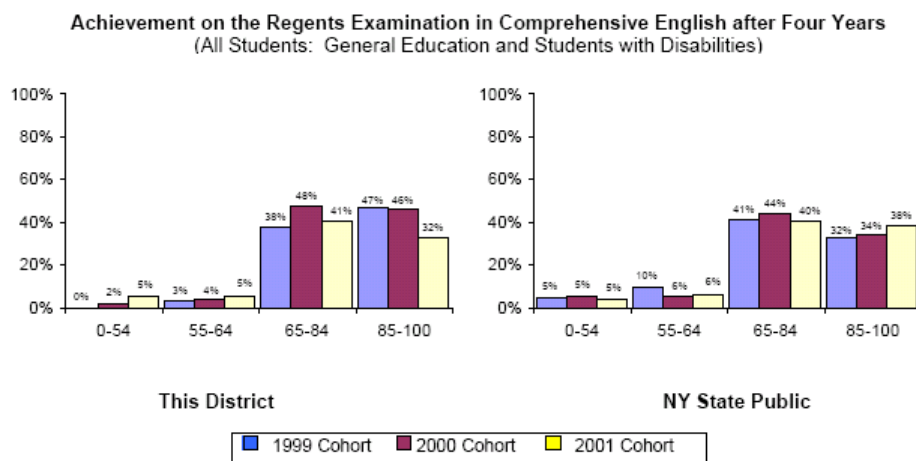


Town of Jewett Comprehensive Plan October 2007

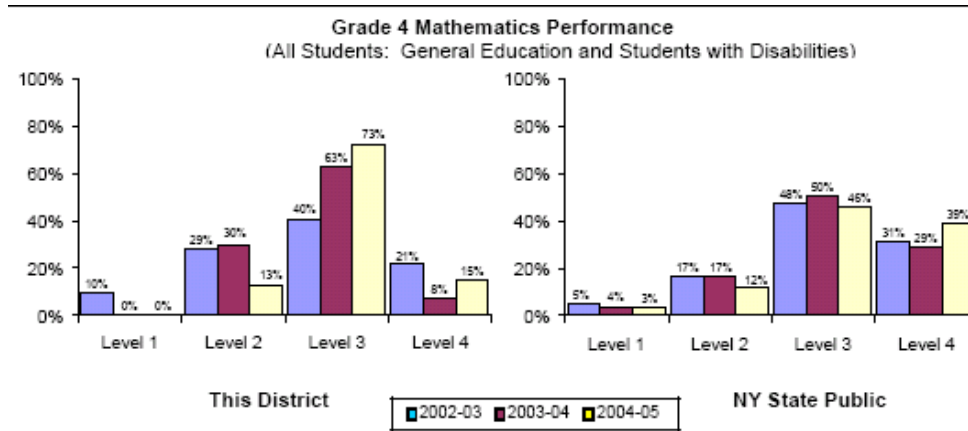


The following charts show the performance levels of the Windham-Ashland-Jewett Central School District for High School

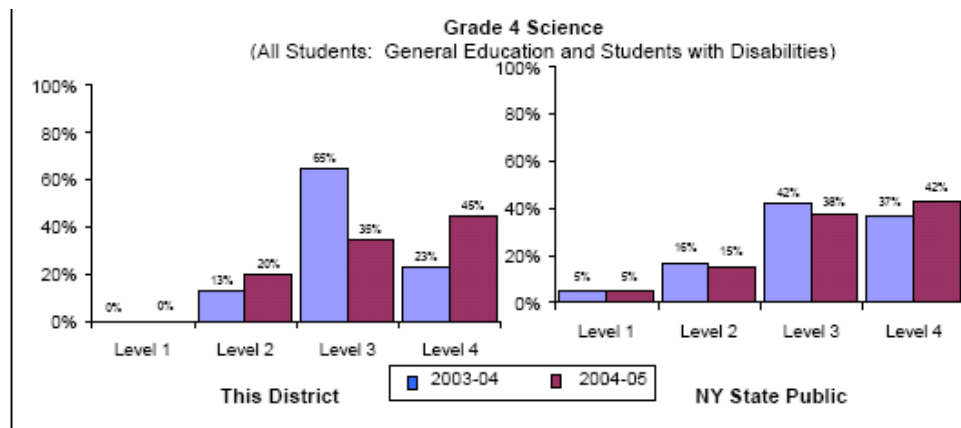
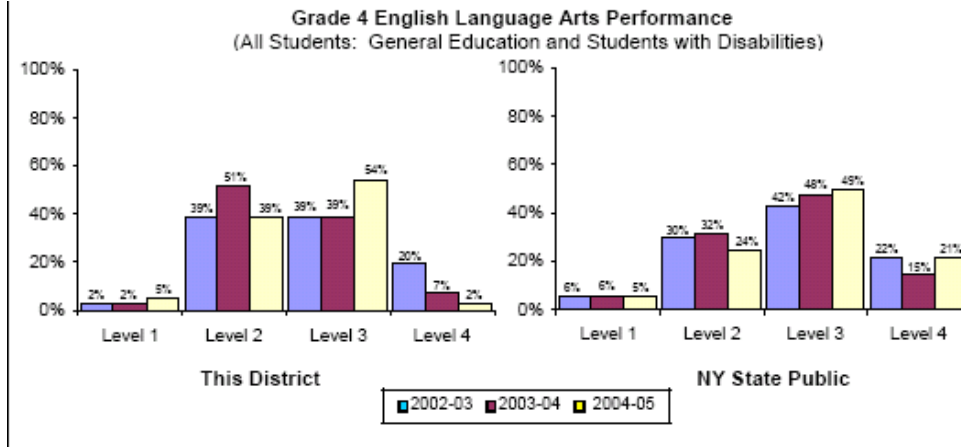
testing.



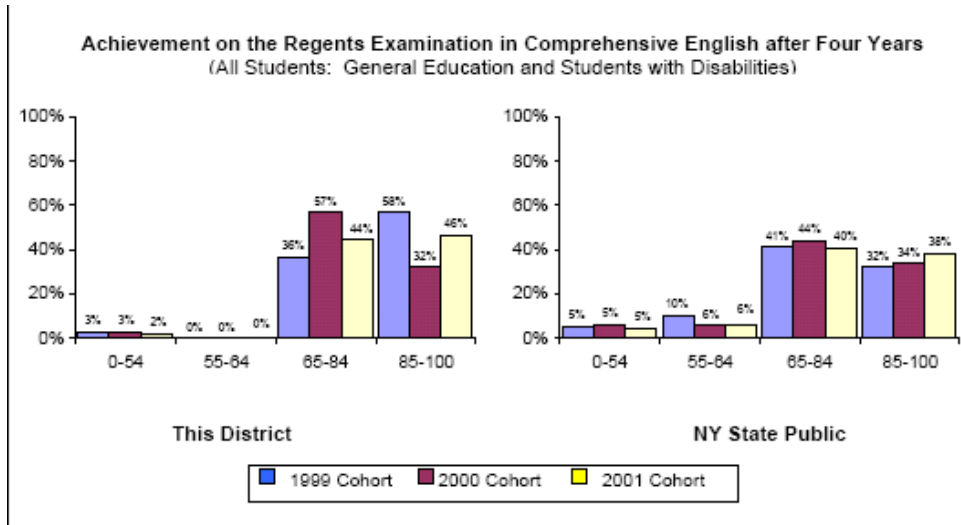
Town of Jewett Comprehensive Plan October 2007



The following charts show the performance levels of the Hunter-Tannersville Central School District for elementary testing.

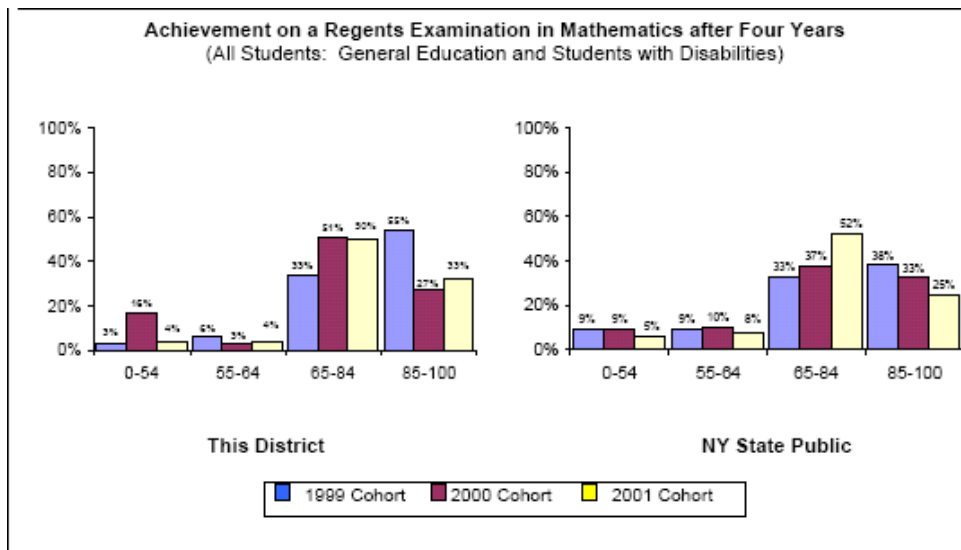


Town of Jewett Comprehensive Plan October 2007



The following charts show the performance levels of the Hunter-Tannersville Central School District for High

School testing.



Alternatives for public education are somewhat limited with the Catskill Bruderhof School located just outside Tannersville, St. Patrick's Elementary school in Catskill, NY and the Grapeville Christian School near Coxsackie, NY. The closest post-secondary option available to local residents is the 2-year Columbia-Greene Community College in Greenport, NY. The Albany area has many post-secondary options. Albany, Schenectady, and Troy each have a well-funded junior/community college and the State University at Albany.

Town of Jewett Comprehensive Plan October 2007

Other 4-Year State University campuses are located about an hour away in New Paltz, Cobleskill, and Oneonta. Within an hour are many 4-year college options, representing a wide range of school size, program/discipline choice, academic rigor, and cost. These institutions include Hobart College, Marist College, Vassar College, Rensselaer Polytechnic Institute, Union, Siena, Russell-Sage, and St. Rose.

F. Community Facilities and Infrastructure

1. Transportation

Jewett has nearby access to, but is not near major interstate transportation links such as the New York State Thruway. The Town is accessible from State and County highways. With a mountainous topography it has a somewhat disconnected roadway network, with most major roads following the primary waterway valleys.

There are a total of 40 centerline miles of roads in the Town. 20 miles of these roadways are surfaced with blacktop, 18 miles with cold mix pavement, and 2 miles of gravel surface.

There are two State Routes through the Town, Route 23A that runs roughly east-west along the Schoharie Creek drainage through the westernmost portion of the Town. This route is the primary direct linkage from the Town to the villages of Hunter and Tannersville and the rest of the Hudson Valley region by way of its connection to the New York State Thruway (Interstate 87) about 27 miles to the east. To the west, this route joins with State Route 23 linking further west to the Delaware River Valley, the Village of Stamford and further to Oneonta and Interstate 88. In 2005, traffic volume along the route (Annual Average Daily Traffic or AADT) was 1630 vehicles. In 2004 the AADT was 1500 vehicles.

State Route 296 runs north-south through the center of the Town and connects the Town to the communities of Windham, Durham and Catskill (via State Route 23), and Hunter and Catskill (via State Route 23a). In 2006, traffic volume along the route had an AADT of 1600 vehicles. In 2004 the AADT along this route was 1450 vehicles. This data indicates that traffic volumes have increased.

The primary arteries in the Town are County Route 23C and 296. This road serves as the most direct link between the hamlets of Jewett and East Jewett and is the primary collector road for most of the Town's local roads. To the east this route links with Route 23A in the Village of Tannersville. Other County Routes within the Town include Routes 13, 14, 17, 40, 77, 78, and 296.

Albany International Airport is about an hour and a half to the north and Stewart Airport is about an hour and a half to the south. An airfield in Kingston provides some access for small, private planes.

Amtrak has a station in Hudson that provides interstate rail service to Albany, New York City, Montreal, Buffalo (to Cleveland/Chicago/Toronto), and Boston. Long distance bus service is available through a Trailways route between Oneonta and Saugerties with scheduled stops at Hunter and Hensonville.

Town of Jewett Comprehensive Plan October 2007

2. Emergency Services

Police Protection

The Town has no municipal police department. Police protection is provided by the Greene County Sheriff based in Catskill and the New York State Police (Troop F) with a station in Hunter/Tannersville. There is county-wide 911 service. DEC provides a Constable for the Colgate Lake area during the summer as well as Forest Rangers. New York City Department of Environmental Protection Police also patrol and cover the Town of Jewett.

Fire & Rescue

The Town of Windham Ambulance Service located on Route 296 in Hensonville provides Jewett's life support / transport to hospital based care in Hudson and Albany. It replaced the Jewett Rescue Squad, which disbanded in 2000.

The Jewett Fire Company and East Jewett Fire Company and Rescue Squad provide the Town's emergency fire protection. The Jewett Fire Company covers the area west of Route 296. The facility is located on Route 17 in the Hamlet of Jewett. The company responds to approximately 30 calls per year. There is a mutual aid agreement with all surrounding Towns. There are 28 total and 10 active members. They have 4 fire trucks and one retired ambulance. Their squad's brush truck needs to be replaced with a larger vehicle.

The East Jewett Fire Company and Rescue Squad cover the area of Town east of Route 296. The station is located in the Hamlet of East Jewett on Route 23C. The company responds to 40-50 calls per year, of which approximately 35 are EMS First Responder calls. The company has 25 total and 12 active members. They have two tanker trucks (year 1980 and 1987) and one older (year 1976) utility/brush truck. The Rescue Squad has one ambulance for first responder duties (no transporting). A 'new truck fund' was established four years ago and grants submitted to purchase an ATV for wilderness emergency response.

The fire companies are generally concerned about the aging of its members as well as homes that are rundown and potentially unsafe and/or far off the road to allow for proper and safe firefighting access. Specifically they have concerns about Alpine Village on Goshen Street, Harriman Lodge, Camp Tri-Mount, Colgate Lake, and emergencies on the many state trails in the district.

3. Town Owned Buildings, Property, & Equipment

The Highway Department has four full time employees who maintain and operate the equipment listed below. There are ongoing problems with flooding, landslides, and drainage problems particularly along Carr Road and Wright Road near Route 23A.

Town of Jewett Comprehensive Plan October 2007

The Town has both a formal and informal agreements for sharing of highway resources and services between mountaintop towns.

Highway Department Buildings / Equipment

- a) Highway Garage (3547 Route 23C)
- b) Salt Barn (3548 Route 23C, 10-years old)
- c) 6 large trucks with 5 plows (condition ranges from new to better than average, 8-10 year replacement plan)
- d) 2 smaller vehicles (year 2004 and 2006)
- e) 1 grader (1970)
- f) 1 backhoe (1988)
- g) 1 loader (1997)
- h) 1 tractor (1995)
- i) 1 roller (1995)

The Town owns 7 parcels of land totaling 14.18 acres. The Highway Department is responsible for maintenance of these lands. There are no county owned lands within the Town. The State owns 7,427 acres in the Town that are part of the Catskill Forest Preserve administered by the NYS Department of Environmental Conservation. There are no Town or county parks in Jewett. The Town is seeking to update its' highway department facilities, with safety improvements needed in the short term. Ultimately, there is need for more modern facilities at the highway department.

Camp Harriman is a state-owned facility (Office of State Mental Health). New York City owns 4 parcels of land (272.4 acres) of land within the Town.

A Boy Scout camp is also located in Town.

4. Utilities & Basic Services

Electric: NYSEG, CH Energy

Local Phone Service (Land Lines): Verizon (DSL service is limited), AT&T

Wireless Phone Service

(All carriers have limited coverage in Catskill mountaintop towns)

Cingular – 'partner' coverage

Sprint – off PCS network coverage

Cellular One – limited coverage

Verizon Wireless – within National Enhanced Service Area (no detailed coverage map)

Nextel – Almost no coverage

T-Mobile – almost no coverage

Cable Service: Time Warner (coverage throughout the Town is only partial due to the low density of residences along many Town roads) and Mid-Hudson Cable.

Town of Jewett Comprehensive Plan October 2007

Solid Waste: Private haulers and transfer stations located in Hunter and Windham provide waste and/or trash disposal.

G. HISTORIC and CULTURAL RESOURCES

The Town of Jewett was incorporated as a town in 1849. It is named for Freeborn G. Jewett, a 19th-century chief justice of the New York State Court of Appeals. The town lies in the center of an elevated plateau that longtime residents call the Mountain Top. Its borders are entirely within the Catskill State Park, and the New York City Watershed.

The Town of Jewett is the geographic offspring of several prior subdivisions of larger (in area) towns. Jewett had originally been settled around 1784 as part of the Town of Woodstock. As local populations rose, the Jewett area then became part of the growing new Towns of Windham (1798), Hunter (1813), and Lexington (1813).

As the town grew, several crossroads and mill sites attracted settlement and home construction. These locations developed into several notable hamlets throughout the town, which contribute to Jewett's rural and historic character. Jewett's hamlets include: Jewett, East Jewett, Jewett Center, South Jewett, West Jewett, and Beecher Corners.

In the early 19th Century, Jewett's development was primarily related to the growth of the timber harvesting industry and the processing of timber products into both lumber and leather. As the forests were cut back, agriculture also took hold in Jewett, particularly along the flatter, richer glacial bottomlands of the East Kill.

Through the middle of the 19th century and into the 20th century, tourism followed in the footsteps of the Hudson River School painters and grew to replace timber harvesting and agriculture as the primary economic engine in the community. Today, nearby state-owned 'Catskill Park' lands and the ski resorts of Hunter and Windham draw visitors from outside the town for summer and winter recreation. There are many second homes in the town as well as a large number of units available for seasonal or long-term vacation rental.

The Mountain Top Historical Society of Greene County was formed to promote the increase of knowledge of and interest in that portion of the Catskill Mountains referred to generally as the "Mountain Top" through the study and preservation of its art, literature, history, culture, folklore, legends and environment by means of a variety of programs, activities and projects. It serves as the local historical knowledge base and sponsors a quarterly newsletter, educational events and workshops, and a popular series of guided hikes focused on local and regional history.

Other historic resources of local significance in Jewett include:

- Several period metal truss bridges over the East Kill at Beecher Corners Road, and Lower/Upper Mill Hollow Road, as well as at Halsey Brook and Deming Roads
- The Sunny Brook House and Annex
- A grouping of buildings along State Route 296 between its intersections with Goshen Street and Round Hill Road (building #'s 930, 932, 934, 936, 944, 948, 950, & 952 NY 296) potentially comprising a local historic district

Town of Jewett Comprehensive Plan October 2007

- The Distan, Dutcher & Roe, Egbertson, Roaring Brook, and 7 unnamed sawmills along the Schoharie Creek
- The Dubois Carpenter Shop
- The Graham Tannery & Shoe Shop
-

The following sites are included in the historic inventory (according to New York State Historic Preservation Office, 2007):

Dubois Carpenter Shop
Dutcher and Roe SS Mill
Egbertson Sawmill
Graham Tanner and Shoe Shop
Grist Mill
Roaring Brook Sawmill
Sawmill, East Jewett
Sunny Brook House and Annex Site
Beeches Corners Road Metal Truss Bridge
Church St. Jewett Presbyterian Church
Church St. Methodist Episcopal Church (Former)
Deming Road Metal Truss Bridge
Halsey Brook Road Metal Truss Bridge
Lower Hollow Road Metal Truss Bridge
NY 296, East Side, Across from Goshen Street
Buildings located on NY 296, East Side, near Goshen Street, South Corner of Round Hills Road, Windham/Jewett Line.
Upper Mill Hollow Road Metal Truss Bridge
A variety of other sawmill sites

Four locations in Jewett are on the Greene County Historic Register: The Dr. Camp/Goslee Farm, 4 Goshen St. Rd.; The Presbyterian Church, CR 17 & Merwin St.; Blue Willow, CR 17 & Merwin St., and Miles Bridge, Beeches Corner Rd. The Presbyterian Church is the only structure currently on the National Historic Register.

The 1972 Inventory of Local Historic Buildings lists the following historic resources for Jewett:

ID Number	Description	Text
2	Large 2 ½ story clapboard farmhouse	Former home, sawmill, and store of Alanson J. Woodsworth. Barns alongside with unbonded stone foundation, date unknown. House used as residence and in good condition.
3	2 story red shingle farmhouse, mid 19 th century	Former home of George Miles Jr. Seasonal residence, good condition. Barns in rear, data unknown. Several stone walks on property.
4	2 story white clapboard farmhouse	Former home of Samuel Osborne (1762-1854). Dormers in front. Excellent condition.

Town of Jewett Comprehensive Plan October 2007

ID Number	Description	Text
5	2 ½ story white clapboard farmhouse	Former home of Charles B. Peck. Good condition. Used as residence.
6	1 ½ story white clapboard farmhouse	Former home of J. Bloodgood, first half century. Block Style. Good condition. Used as residence.
7	Large 2 ½ story white clapboard farmhouse	Former homestead of Chester Hull (1766-1847. Good condition. Now used as residence, antique shop, and boarding house.
8	Jewett Presbyterian Church, 1848	White clapboard. Good condition.
9	Jewett Methodist Episcopal Church, prior to 1867	White clapboard. Good condition.
10	2 story white clapboard	Former home of West Chase (1800-1879). Also used as early inn and post office. Good condition. Used as residence. Motel adjoining.
11	East Kill Methodist Episcopal Church, 1834	Now Methodist Church of Jewett. White Clapboard. Excellent condition.
12	Rice Homestead, 1793	1 ½ story small block cottage, clapboard siding. Now a wing of larger building added later on. Fair condition.
13	Large 2 story brick farmhouse, prior to 1867	Used as residence. Good condition.

Map 15 shows historical and archaeological resources according to the data from the State Historic Preservation Office.

Places of Worship

E. Jewett United Methodist Church
Route 23C, E. Jewett

Jewett Presbyterian Church
County Route 17, Jewett

St. John The Baptists Ukrainian Catholic Church
State Route 23A at Ukraine Road, Hunter

Cemeteries

Jewett has an abundance of cemeteries for a community of its small population. Typically for a long-time rural settlement, most of these graveyards would be in the form of small family plots. These sites contribute significantly to the visual rural and historic character of the town. These sites include the following:

Town of Jewett Comprehensive Plan October 2007

Unnamed – Jewett Center – State Route 23A near former Weininger’s farm; oldest in town

Unnamed – South Jewett – County Route 23C near old Jones’ Bridge

Maplewood – South Jewett – State Route 23A west of South Jewett

Jewett Heights – County Route 23C at County Route 17

Hull-Peck – Goshen Street near junction with County Route 17 across from Goslees’ farm

Miles – Goshen Street behind Baily’s farm

Towner Cemetery / East Kill Cemetery – Beecher Corners – ½ mile west on County Route 23C

Mills – near junction of County Route 23C and Merwin Road on Slutzky property

Old Cemetery – Farber Road and County Route 23C 1 mile west of County Route 40

Old & New East Jewett Methodist Cemeteries – County Route 23C behind church

Eastkill Valley / Lord Cemetery – County Route 23C behind fire house and Loucks’ property

Chase – near junction of County Routes 23C and 17 behind Kobzibar residence

Lawrence – on Lawrence Property

Cultural Events / Resources

The Town of Jewett has no library within its borders, but there are three facilities surrounding the town in Hunter, Windham, and Haines Falls. These libraries are part of the regional Mid-Hudson Library System and provide access to the regional system’s holdings through inter-library loan. They have some programs aimed at young children and teens.

There is no dedicated year-round cultural venue within Jewett, but many events take place during the summer in nearby Windham and Hunter. On two weekends in July and August, the Music and Arts Center of Greene County sponsors Music At Grazhda within the town of Jewett, which is a celebration of traditional classical Ukrainian music. The event is held in a unique hall designed in the architectural style of the Carpathian region of Ukraine.

The Catskill Mountain Foundation (CMF) is the most active regional cultural group. The CMF is a regional organization dedicated to spur arts-based community revitalization and redevelopment in the mountaintop towns. It sponsors a number of resources and events, including classical music (in both Hunter and Windham), theater, popular music, and family fare. The CMF operates a movie theater year round located in the Village of Hunter, and features local products at its Farmer’s Market & Café. The CMF uses the former Sugar Maples resort in Maplecrest just north of Jewett as an arts education facility with elder-hostel like workshops and classes. This former resort is also the site of the Windham Chamber Music Festival (August). The foundation sponsors a large largest annual event - the Mountain Culture Festival - with music, art, crafts, food, and agriculture held during early July in the Village of Hunter. The Catskill Mountain

Town of Jewett Comprehensive Plan October 2007

Foundation is also working to raise funds to convert the defunct Orpheum Theater into a regionally significant performing arts center.

Greene County Council on the Arts runs the Windham and Catskill Gallery and a summer youth program. Other cultural organizations in the region include the Mountain Top Historical Society, Windham Chamber Music Festival, and the Hudson River School Art Trail Interpretive Center.

The Hunter Mountain Ski Resort hosts other large-scale festivals such as the annual International Celtic Festival and German Alps Festival. Belleayre Mountain hosts an annual Winter Festival Week. Communities nearby to the mountaintop towns also host a number of well-known events. For example, there is a Bavarian Summerfest in Round Top (June), a weeklong festival of Irish Music and Dance in East Durham (July), and the Hudson Valley Garlic Festival in Saugerties (September).

The Zadock Pratt Museum lies west of Jewett in Prattsville. It is dedicated to exhibiting the history and culture of the Northern Catskill Region during the mid-nineteenth century, the heyday of the hemlock-based tanning industry in the area. The museum is located in the homestead of Zadock Pratt, the founder of Prattsville. He was a prominent tanner and his life serves as the focal point for interpreting this important period of regional history. The landmark Pratt house serves as a backdrop for many education and cultural events and exhibits.

A local publishing firm, Black Dome Press is located just north of the Town of Jewett in the Hamlet of Hensonville. Through its focus on the Catskill Mountain & Hudson Valley tales and history (both natural and cultural) of mountaintop communities it serves as an important regional resource.

Public Access Recreational Land

The Town of Jewett contains over 7,000 acres of state-owned, forested lands, including Colgate Lake. These lands contain many recreational trails which access ridgelines and mountaintops with stunning views as well as deep forests and glacially carved valleys with cool mountain streams. There is currently no Town Park or green. Jewett currently contracts with surrounding towns for summer youth recreation programs. It has also cooperated with other mountain-top towns to obtain funding to complete a recreational inventory of the mountains and to look for other opportunities to expand recreational activities.

The NYS Department of Environmental Conservation manages this land for public use as part of the Catskill Park. The DEC maintains some minimal facilities such as trailhead parking areas, and lean-to's to facilitate public enjoyment of these lands. Non-profit organizations such as the NY-NJ Trail Conference and the Adirondack Mountain Club provide volunteer trail maintenance support and publish popular and regularly updated sets of trail maps.

Town of Jewett Comprehensive Plan October 2007

Colgate Lake is State-owned Forever Wild recreation area that is a popular destination containing a small, pristine lake. Starting in 2007, the State will be closing the area to fix the dam, which has been deteriorating. The reconstruction of the dam will most likely utilize the parking area during construction activities. There have been issues in the past related to parking, traffic, and trash related to high usage of this area. New York State is currently developing a comprehensive management plan for all of its Forever Wild areas.

Natural Open Space & Scenic Areas

The presence of the ‘forever wild’ Catskill Park lands ensures that Jewett will always have an ample supply of open space and forested mountains as its backdrop. Among the most significant scenic mountain features are The Blackhead Range: Black Dome / Thomas Cole mountains to the east of the town; Cave / Tower Mountains, Patterson Ridge, and Round / Van Loan Hills to the north of the town; Evergreen / Rusk / West Kill / Hunter / Onteora / Parker Mountains and the East Jewett Range to the south of the town.

There are no current state or locally designated scenic areas within the Town. The Catskill Park was established in part to protect scenic beauty.

H. The New York City Watershed

(Excerpted From the Catskill Watershed Corporation website):

The New York City Watershed encompasses some 1,900 square miles of land in the Catskill Mountains and Hudson River Valley Region of New York State. It serves as the primary source of drinking water for the New York City water supply system, which provides approximately 1.5 billion gallons of water daily to more than 9 million customers in New York City, as well as areas of Westchester, Putnam, Orange and Ulster Counties.

The Watershed is actually divided into two separate systems -- the Catskill/Delaware Watershed and the Croton Watershed. The Catskill/Delaware Watershed, located approximately 100 miles northwest of New York City, provides 90 percent of the City's drinking water. It covers over 1,600 square miles of land in five counties, and consists of six major reservoirs -- the Ashokan and Schoharie Reservoirs of the Catskill System and the Rondout, Neversink, Pepacton, and Cannonsville Reservoirs of the Delaware System. Water originating from the Catskill system travels via the Catskill Aqueduct to the Kensico Reservoir in Westchester County, which serves as a balancing reservoir for both systems. Water from the Delaware System, on the other hand, travels under the Hudson River via the Delaware Aqueduct, which empties into the West Branch Reservoir, and eventually to the Kensico Reservoir.

How Did This Agreement Come About?

For over one hundred years, New York City's drinking water has had the reputation of being among the purest in the nation. Over the years, however, land use changes and development pressures have increasingly threatened the quality of the City's water supply.

In 1989, the United States Environmental Protection Agency (USEPA) promulgated the Surface Water Treatment Rule (SWTR) to protect drinking water sources nationwide pursuant to the 1986 Safe Drinking Water Act Amendments. These new rules mandated that all surface drinking water sources -- including the New York City water supply -- would have to meet certain water quality standards by June 1993 or be filtered. The City estimated that it would cost from \$4 to \$6 billion to filter the Catskill/Delaware supplies, which would more than double current water rates.

In September 1990, the New York City Department of Environmental Protection released a draft Watershed Protection Plan which included, among other things, revised watershed rules and regulations (which had not been updated since 1953) and a land acquisition plan. This draft document spurred opposition on the part of communities located within the watershed, and out of this opposition came the formation of the Coalition of Watershed Towns in 1991.

Town of Jewett Comprehensive Plan October 2007

In January 1993, the USEPA issued the City a one-year "Filtration Avoidance Determination" or "FAD." As a condition of the FAD, the City was required to, among other things, issue final proposed Watershed Regulations, to begin to acquire land and conservation easements by June 30, 1994, and to upgrade sewage treatment plants in the Watershed.

Based on its determination that the preliminary conditions were met, the USEPA granted a second FAD in December 1993, effective until December 15, 1996. This second FAD stipulated, among other things, that the City must have satisfactory watershed protection programs in place, including revised Watershed Regulations that were to be in effect by September 30, 1994 (later changed to April 15, 1995). In addition, the City was required to commit to a land acquisition program that would result in the acquisition of at least 80,000 acres of land by December 31, 1999.¹

After years of controversy and litigation, which prevented the City from promulgating new regulations or from buying any land, Governor Pataki convened the interested parties in April 1995 to resolve the multitude of issues involving the Watershed. After seven months of intense negotiations, on November 2, 1995, the parties involved announced that they had reached an *Agreement in Principle* outlining the measures that would be taken to maintain and enhance the quality of the City's drinking water supply, while protecting the economic vitality and social character of watershed communities. Over one year later that Agreement in Principle was translated into a *Memorandum of Agreement* which serves as the legal mechanism through which the "Watershed Protection Plan" will be implemented. The Agreement is a legally binding document which sets forth certain obligations by the parties involved on issues relating to the protection of the Watershed.

The "Memorandum of Agreement" or "MOA" consists of several components addressing different issues. The three main components of the MOA include the Land Acquisition Program, Watershed Rules and Regulations, and Watershed Protection and Partnership Programs.

The Town of Jewett is wholly within the New York City Watershed and land uses are subject to the Watershed Regulations. Some key elements of the Watershed Regulations that affect Jewett include:

- All septic systems installed, repaired or replaced in the Watershed require prior approval by the City, and no septic systems are allowed within 100 feet of a watercourse or wetland or within 300 feet of a reservoir. It should be noted that these standards are state-wide standards, and not exclusive to the Watershed.
- No new impervious surfaces are permitted within 300 feet of a reservoir, or 100 feet of a watercourse or wetland. Some exemptions to this rule exist for villages, hamlets, commercially zoned areas, and single family home construction.
- Construction of new roads is prohibited within 50 feet of intermittent streams or wetlands, 100 feet of perennial streams or 300 feet of a reservoir. Access roads to

Town of Jewett Comprehensive Plan October 2007

subdivisions are allowed within the 100 foot buffer subject to approval by the City of a stormwater pollution prevention plan.

- The location of new petroleum storage tanks is restricted. For example, no new gas stations or underground home heating oil tanks are permitted within 100 feet of a watercourse or 500 feet of a reservoir.
- No new registered hazardous substance storage tanks are permitted within 100 feet of a watercourse or 500 feet of a reservoir.
- Many types of new commercial and industrial projects within the Watershed now require the preparation of a "Stormwater Pollution Prevention Plan" (SPPP), which must be reviewed and approved by the City before final project approval may be granted. Examples of projects that would require a SPPP include:
 - o the development or disturbance of land greater than 5 acres in size;
 - o construction of a subdivision (defined as 5 lots or more of 5 acres or less each), a new paved road or a gasoline station;
 - o construction of a new industrial, commercial or multi-family residential project that will create more than 40,000 square feet of impervious surfaces;
 - o construction of an impervious surface in a village, hamlet, or commercially or industrially-zoned area in the Watershed;
 - o an expansion of up to 25% of an existing commercial or industrial facility's impervious surfaces if it's within 100 feet of a watercourse or wetland.

All existing septic systems that are operating according to federal, state and local approvals, but don't meet the additional requirements of the watershed regulations, are allowed to continue. However, if a septic system should fail and need major replacement, its repair should be made according to the new standards. If, because of site limitations or other conditions, that is impossible, the owner must work with NYCDEP to determine the most appropriate design and location. In addition, NYCDEP must review and approve any modification, expansion or remediation of an existing septic system. Routine repairs and maintenance are not affected by the regulations.

With regard to new septic systems, the NYCDEP will continue to monitor and approve design, treatment methods, construction, maintenance and operation. New conventional septic systems will not be allowed within 100 feet of a watercourse or 300 feet of a reservoir. When site conditions are unsuitable for a conventional system, raised systems are allowed, with certain restrictions including that they can not be within 250 feet of a watercourse or 500 feet of a reservoir or lake.

In addition, the new regulations:

- prohibit mound systems, intermittent sand filters and evapotranspiration/absorption systems;
- require an additional area of at least 100% of the primary absorption field's area to be set aside as a reserve field;

Town of Jewett Comprehensive Plan October 2007

- prohibit the building of primary or reserve fields under pavement or other impervious surfaces;
- call for at least one percolation test and one deep hole test to be performed in both the primary and reserve absorption areas and the tests must not be greater than 3 minutes percolation per inch or slower than 60 minutes per inch;
- prohibit the siting of new septic systems where soil percolation rates are inadequate;
- require a pump system to have a backup storage tank capable of holding one day's flow.

The watershed regulations govern the siting of new impervious (i.e. paved) surfaces such as roads, roofs and parking lots. The regulations prohibit the construction of impervious surfaces within 100 feet of a watercourse or 300 feet of a reservoir although exceptions may be given in the following circumstances:

- the construction of improvements or additions to an individual residence (as long as they are non-commercial);
- agricultural activities;
- the construction of a new road needed to provide access to 2 or more parcels of land or to a subdivision;
- the paving of an existing dirt or gravel road;
- the construction of a driveway, where the driveway is needed to provide access to an existing residence.

With regard to limits on new residential construction, impervious surfaces are prohibited within 300 feet of a reservoir and within 100 feet of a watercourse or wetland. When an exception is given to this rule, an "Individual Residential Stormwater Permit" from the NYCDEP will be required.

The watershed regulations stipulate that no new home heating oil tanks will be permitted within 100 feet of a watercourse or 500 feet of a reservoir.

Comparison of Local Requirements in Jewett and NYC Watershed Regulations

1. Current zoning lists no specific requirements for siting structures or septic systems. It simply indicates that all development must be compliant with the 1997 New York City Watershed Memorandum of Agreement. Although this general reference may be acceptable legally, it does not provide the specific details as to lot layout that is needed by both the applicant and the Planning Board. So that the expectations are known by all parties, it is recommended that the local zoning be amended to include the NYC setback requirements as outlined above instead of a general reference as currently exists.

2. The lot size and dimension requirements for the RR, RC, and C districts are likely to be large enough to incorporate the setback and siting requirements of NYC. However, depending on site conditions and presence of streams, it is feasible that a 1.5 acre lot (minimum as required in the HR district) may not be large enough to accommodate required setbacks.

Town of Jewett Comprehensive Plan October 2007

3. Article VII (Non-conforming buildings and uses) allows for existing undersized lots to be considered complying if the lot is less than 20,000 square feet with a width of less than 80 feet. Although this is appropriate, common, and acceptable for local zoning laws, such a lot may not meet the NYC required setbacks as outlined above. It is recommended that a note be added to this section indicating that in order for an existing, undersized lot to be considered complying, it must also meet the requirements of the NYC Watershed.

4. Neither Local Law #3 of 2004 (Subdivision) nor Local Law #4 of 2006 (amendment to the Subdivision Law) specifies NYC Watershed Regulations. To be consistent with the recommendation for zoning in #1, above, it is recommended that the specific rules, setbacks and references to the NYC Watershed Regulations be included in the subdivision law.

5. Subdivision Law Article VI, Section 3(I) indicates that there must be a 20' watercourse easement or drainage right-of-way when a watercourse separates a proposed road from abutting property. Given the NYC Watershed regulation that no road, driveway or impervious surface is allowed within 100 feet of a perennial stream and 50 feet of an intermittent stream, the 20' local requirement may not be adequate. It is recommended that this section be amended to require setbacks consistent with the NYC Watershed Regulations.

Appendix B: Public Input

Jewett Public Opinion Survey

In February, 2001, approximately 1500 surveys were sent to taxpayers in the Town. Returns came in over several months and 503 were ultimately received and included in the results. This represents a 34% participation rate. Given that good response rate, the Committee felt that the survey was very valid to elicit informative responses that represent the community. During development of this Comprehensive Plan, the survey results were also compared to the Workshop results to see how they correlated to each other. A copy of the survey can be found in Appendix A.

Analysis of Survey

1. The quality of public services (roads, snow removal, ambulance, police, fire, and 911) were examined. All these services were rated as satisfactory to excellent by the vast majority of participants. Less than 10% rated any as poor. Snow removal had the highest percent of “excellent” ratings (60%). All other services had “satisfactory” ratings from about 53% to 64% of participants. More people addressed road services than the emergency services. This was most likely because they were not familiar enough to rate the quality of emergency services.

Conclusion: Participants are satisfied with most of these public services, and are especially happy with the quality of snow removal.

2. The majority of participants did not want to see municipal-funded trash removal (59%) with about 18% saying they would like that and 23% saying “maybe”.

Conclusion: There was not strong support for municipally funded trash removal.

3. The majority of participants did not want tax dollars (along with grant monies) to be put towards more recreational facilities (community center, picnic area, ball field, park, basketball court, ice skating rink). About 20% to 30% supported this idea, but well over 50% indicated they would not support this. About 16% to 20% of participants said “maybe”. For those people who supported use of tax dollars for these recreational facilities, the most favored use was for a park, followed by an ice skating rink, and a community center.

Conclusion: Although there is some support for tax and grant dollar funding for additional recreational facilities, more people did not favor this. However, some additional support could be raised depending on the level of tax funding and activity. Since 2001, an ice skating facility has been built at Windham Ski area. Therefore, any future recreational facilities should concentrate on park and community center activities.

4. There was a very low response rate (40% of participants answered) to the question about whether people would attend or volunteer at a community event. For those that did answer, attendance at events was more preferable than volunteering. The most volunteer interest was with a Town-clean up day. For those that did answer, there was a high level of interest in these

57Town of Jewett Comprehensive Plan October 2007

activities. In order of interest were: Annual Town Meeting, Meet the Candidates Day, Town Wide Garage Sale, and Annual Town picnic, Town Wide Clean-up Day.

Conclusion: It may be difficult to get large numbers of residents to volunteer for these town activities. A look at the numbers indicates that there were about 40 people interested in volunteering. Although that number is small in relation to the whole Town, that level of volunteerism may be enough to adequately carry out these events. About 40% of participants said they would be interested in attending community events.

5 and 6. Over ½ of participants were not familiar with the Town's zoning. Of these who were, most (74%) felt the regulations were sufficient to guide future land use and development in the Town.

Conclusion: There were high levels of satisfaction with the zoning regulations.

7. This question asked about different development opportunities. The majority of participants indicated they wanted to discourage light industry and encourage tourism, arts and culture, and businesses that adaptively re-used farm buildings and preserved farmlands. A slight majority of participants felt that all of the other development activities should be allowed, but not to be encouraged (about 45% to 50%). A sizeable percentage of participants did want to encourage these activities as well (about 40%). Slightly more people wanted to encourage small retail uses (48%).

Conclusion: Overall, the only use not favored by participants was light industrial uses. The Town should find ways to actively encourage arts and culture, agricultural uses, and tourism. Second home ownership, and small retail/service businesses home occupations and senior citizen/retirement housing should at least be allowed, and many would support encouragement of these activities.

8. People do not want to see less regulation. There was a great deal of support for more regulations of debris and junk. All other topics (commercial signs/lights, noise, home occupations, commercial development, and timber harvesting) had more people in favor of keeping regulations about the same as now.

Conclusion: Develop additional regulations pertaining to debris/junk, and maintain about the same level of regulation for other areas.

9. There was overwhelming support for regulating rental properties in regard to occupancy limits, parking requirements, and trash (50% to 70%).

Conclusion: The Town should develop rental property regulations.

10. All aspects of the environment explored in this question were considered to be "very important" by a strong majority of participants (64% to 90%). Less than 8% of participants indicated these features were not important. Drinking water and surface water quality were the most favored, followed by scenic views, forest lands, stream erosion and sedimentation,

58Town of Jewett Comprehensive Plan October 2007

compatibility of buildings to rural and small character of Jewett, historic buildings, open space, and farmland.

Conclusion: Support for these environmental features can be translated into the need to ensure that Town policies and regulations address and protect these features.

Many written comments were received. When asked what suggestions people had for additional retail businesses, food related and small retail shops were the most frequent. Food related uses were restaurants, grocery store, and ag-business/ag-product businesses. The following list is a summary of comments received directly from survey participants and organized into strengths and weaknesses.

Strengths of Jewett included:

- Beauty and rural character
- Quietness
- Cleanliness
- Friendliness
- Presence of planning and zoning
- Low crime
- Privacy
- Trails
- Forests
- Wild animals
- Fresh air and water
- Mountains and views
- Sporting opportunities
- Limited government
- Low or reasonable taxes
- Resort and recreational facilities
- Accessibility to New York City

Weaknesses of Jewett included:

- High taxes
- Junk cars
- Litter
- Lack of nearby shopping
- Unleashed dogs
- Noise
- Lack of contractors
- Burning of garbage
- Poorly maintained properties
- Low quality schools
- Derelict houses and properties
- Lack of regulations regarding timber harvesting

Planning and Visioning Workshop

In October, 2006, a public planning and visioning workshop was held at Town Hall. About 20 people attended. The purpose of this workshop was to identify positive and negative features about Jewett. Further, it was important to evaluate how people feel about current conditions in Town since the survey was about 5 years old. Finally, the workshop was designed so that participants could develop a vision statement. This vision statement will set the tone and direction for this Comprehensive Plan. Participants worked at tables in small groups to identify positive and negative features as well as a vision. The details of this work are as follows:

Positive Features of the Town of Jewett: Positive features were identified, prioritized (those that received priority stickers should be considered the most important features) and ideas were generated to help Jewett maintain or enhance these positive features in the future.

Positive Features

Characteristic Mentioned	# Priority Stickers	# Times Mentioned	Ideas to Maintain these Characteristics of Jewett
Nature	4	3	
Beauty	3	3	Large trash day Adopt and road program Flowers (signal)
Lucky enough to have zoning, zoning keeps town beautiful	2	4	Keeping zoning, town park, adopt zoning as needed to preserve more mountains, partner in creation of management plan for streams
Good snow plowing, good road repair,	2	3	Keep employees and equipment and competitive, recognize good work, new roads meet town standards,
Unspoiled viewshed	2	2	Change zoning to limit building height, create land trust
Website	1	2	
Stable government, responsive town board, dedicated town staff members	1	2	
Individuals can participate in government, strong voter turnout and community participation	1	2	
Rural character	1		
Outdoor recreation activities	1		Create access, parking, trail system, trail maps, make agreements with land owners for row's

60 Town of Jewett Comprehensive Plan October 2007

Characteristic Mentioned	# Priority Stickers	# Times Mentioned	Ideas to Maintain these Characteristics of Jewett
Lack of industrial development	1		
Financially sound-tax rate lower than in the past	1		
Bedroom community friendly	1		
Water course and quality			
Trust in other residents			
Town reputation that help create and maintain a pleasant appearance			To keep this way you need a committed town board who care about the kind of town we live in
Small town			
Quilting group			
Quiet			
People in community warm/friendly			Boy scouts – picnic
No industrial air pollution			
No gambling in town			
No commercial center			
No airplane noise			
Lack of population-privacy			
Lack of descriptive factors			
Lack of congesting traffic			
Good stable churches, fire dept. organization			
Farms located in town			
Facility for senior citizens meals			
Cleanliness			

Negative Features of the Town of Jewett: Negative features were identified, prioritized (those that received priority stickers should be considered the most critical problems) and ideas were generated to help Jewett improve and eliminate these negative features in the future.

Negatives

Characteristic Mentioned	# Priority Stickers	# Times Mentioned	Ideas to Improve these Characteristics of Jewett
No medical center, no medical personnel-emergency response rising, poor emergency response time, lack of volunteer fireman	4	5	Get a doctor to come, examine other options and work with other mountaintop communities, offer incentives to doctors to come into area

61Town of Jewett Comprehensive Plan October 2007

Characteristic Mentioned	# Priority Stickers	# Times Mentioned	Ideas to Improve these Characteristics of Jewett
Limited communications, telecommunications and infrastructure	4	4	Town could run a utility/work with other mountaintop communities, expand WiFi and cable and broadband
No neighborhood gathering places, activities for kids, lack of community recreational facilities, limited community facilities	2	6	Expand size of post office, have a town park?, place for picnics, gathering place, pavilion, swings, barbecue, picnic tables, walking paths
Roads: No speed limits on roads, road maintenance, trash along roads, poor road salt quality	2	4	Post speed limits, request study by traffic safety consultant, get better materials
Fewer young people, absence of young people	2	3	Encourage affordable housing. Developing a low income community through an affordable developer-not federal/county. Jobs-home occupation??
Affordable housing for seniors and young couples or singles	2		
Lack of safety on roads and intersections, truck traffic on roads is noisy/fast/dangerous	1	2	Request study
Lack of affordable housing, no \$-can't afford to buy a house	1	2	Affordability?
Assessment and taxes	1		School taxes-outside relief. Star. Senior citizen break.
Lack of employment opportunities, benefits, \$, etc.		3	
Colgate Lake: Mismanagement of Colgate lake, lake usages, traffic at lake		3	
Police-no law enforcement, no control over policing in town		2	Hire a town constable
NYC: buying large tracts of land-holding property?, constantly changing regulations, have too much power		2	
Limited public service, ie garbage etc., police, ambulance		2	County take it out of their budget. Better arrangements and quicker access

62 Town of Jewett Comprehensive Plan October 2007

Characteristic Mentioned	# Priority Stickers	# Times Mentioned	Ideas to Improve these Characteristics of Jewett
So many of the houses are unoccupied so much of the time			
Snowmobilers/4wheelers are a nuisance			
Simplify the rules and enforce what you have			
Outdoor wood burning furnaces			
No sewer treatment plant			
No Public transportation			
No local animal shelter			
Maintain smaller roads			
Lack of stores			
Children are split into 2 different school systems leading to a lack of town identity			

Vision Statements

The following represent the vision participants have for the Town of Jewett. The topics in bold represent the major focus identified for the future vision and the elements below each topic provide more detail and direction about that topic. The details below are the exact words used by participants.

In 15 years, Jewett will ...

Maintain the beauty and serenity of Jewett

Pristine forests and streams

Beautiful quiet, not overdeveloped

Not too much different from what it is now. I like it.

Have Broadband-people working out of their homes.

Maintain a Stable Government

Have Commercial Development: should be on route 23A and 296

Basic needs satisfied

234 and 296 commercial but not major enterprises. Mom and pop store and some lines

LTD community bus routes 23A and 296

Have cottage-type industries that ring income and services to community and utilized natural resources.

63 Town of Jewett Comprehensive Plan October 2007

Small agriculturally-based businesses: wild flower fields “cut your own”, organic small farms, ginseng.

Small forest related businesses: fire wood, maple syrup, blueberries

Small businesses: country store with food basics and local crafts dotted along the town for convenience

Have a diversity of housing configuration

Development is small scale and visually pleasing

More high end homes

Lower income apartments

Houses dotted here and there

Have community recreation and services

Town recreation area

Town activity, picnics, good sprite

There is a place on the roads to ride bikes and walk safely-bike path??

Have development that is controlled to maintain a small town environment and feeling

Updated expanded town hall

Mainly forested with some fields and houses

Small town feels still here

Visually, the town has not changed

A mix of housing-large and small lots and buildings

No development

A residential community

Ridges and mountaintops still pristine-no houses built

More fulltime residents, but slight increase in totally member of houses

Minimize traffic impacts by enforcement of laws

Minimized traffic

Have recreational activities should not be damaging to the natural environment

More conservation easements with hiking trails

No increase in snowmobile and ATV use

Have business development but that is unobtrusive

More at home professional businesses

A few small organic farms where there are now abandoned fields

Small, local businesses still the big attention

No obvious commercial activities

Have be visually appealing, charming, have wildlife, be rustic and environmentally pure

Fresh water

Healthy trees

Clean air

Scenic roadways and viewsheds

Wildlife

No large signage

Agriculture areas still exist

Town Park and walking paths

Stayed a bedroom community

Be a Cultural and Social community with recreation and a friendly neighborly community which employs and offers social activities

Access to skiing

- Art community
- Friendly people
- Active churches
- Social/cultural gatherings
- Social activities for youth and seniors and community
- Good neighbors
- Social meeting place for community get-togethers

Be a well-planned rural safe, predominantly residential town with solid infrastructure encouraging small business

- Beautiful small town charm has been retained small businesses flourish
- New jobs flourish due to influx of internet based jobs incentive to bring in business
- Small businesses: bookstore, coffee shop, small grocery store in hamlet districts
- Crime free
- Grants have made it possible for people to renovate/paint/repair existing housing
- Local police and ambulance
- Limited additional development
- No large industrial/commercial development
- Strong zoning/subdivision regulations for rural residential/small commercial uses
- Good community leadership
- Communications: internet, phone, cable

Retain its rural natural beauty

- No McMansions or Wal-marts
- Rural character maintained
- Restrain growths
- Natural beauty maintained
- Open space development (no clusters)
- Speed bumps on Colgate road
- Outdoor activities in area
- Continue well thought out zoning to prolong natural beauty

Have community involvement

- Recreation center and town hall
- Town park meeting area
- Friendly
- Active participation in government
- Complete community

Have controlled economic growth

- Small business flourishes
- Thriving organic farming community
- Still rural, quiet, peaceful. Small town with big city modern conveniences like broadband, internet, health care centers

Improve public services

- Health services
- Social services
- Health clinics

Be a Town that has responsive government

- Representative responsive government

65Town of Jewett Comprehensive Plan October 2007

All are made to feel welcome cooperative-open, friendly government, responsive to all citizens

Be a Town has good demographic mix

Town has mix of ages

Town is a balanced mix of fulltime residents and part-time, though predominantly full time

Be a Town that has a great community center, spirit of connectiveness and a welcoming atmosphere

A town center

Town park

Town is connected by paths

Jewett has a great community spirit with friendly, helpful, caring neighbors

Preserve the rural nature

Rural environment

Environmental conservation hunting-free zone

Has preserved forest and woodland

Less control of land by NYC

Town as protected important resources and views

Maintains rural look

Underground utilities

Town has growth clustered in certain areas and not spread out

Offer many good services and amenities

Enlightened social services network

Network of services that allows elderly to stay in their homes

Nearby emergency/medical center

Free garbage collection

Town housing in a mix of single family and cluster in all income ranges

Development has been planned perfectly-plenty of homes-but open spaces preserved

Appendix C: Watershed Concepts

Watersheds

Watersheds are important to our communities because they create a sense of place in the landscape and their waters are important in our daily life. A watershed is any land area that contributes runoff water to a particular point along a waterway. A basin-wide watershed (such as the Schoharie Creek) can be broken down into subwatersheds. Within subwatersheds, catchments are the smallest unit. A catchment is defined as the area that drains an individual development site to its first intersection with a stream.

Stream Order

An important concept central to watershed management is the spatial connection between a stream and its full watershed. Because a network of streams drains each watershed, one subwatershed such as those feeding the Schoharie or East Kill creeks are a part of, and has an ecological role in the larger system. There are different kinds of streams within a sub-watershed, or even sometimes within a catchment area. The kind of stream within the watershed is an important feature in watershed management as well.

Streams can be classified according to their “order” in that network. A stream that has no tributaries or branches is called a first-order stream. When two first-order streams combine, a second-order stream is created, and so on. Headwater streams (or the start of a drainage area) can be both first- and second-order streams. They are the smallest streams, but they are crucial because they dominate the landscape through their shear number and length. First order streams are very vulnerable to watershed changes, and are heavily influenced by the amount of impervious surface area within the subwatershed or catchment.

What happens to first order streams is directly translated to third order and higher streams, and therefore affects major receiving waters in turn. Thus, a watershed approach is important both locally and regionally.

Impervious Cover

The conversion of natural vegetation to rooftops, roads, parking lots, and lawns creates a layer of impervious surface in our landscape. Impervious cover directly influences urban streams in many ways. When an impervious surface is present, it can dramatically increase surface runoff during storm events. In urbanized areas, less rainfall is infiltrated through the soil and therefore more volume of water runs off. Runoff volume becomes greater, occurs more frequently and at higher magnitudes. As a result, less water is available to streams during dry periods and more during storms.

This fluctuation itself causes many ecological and biological changes in the stream. Years of research has shown that water fluctuation is inversely correlated with plant and amphibian density in urban wetlands. Declines in plant and amphibian density have been noted when more than 10% of a watershed becomes impervious. Research has shown that even above a 3.4% total

impervious cover, significant increases in water level fluctuation, conductivity, fecal coliform bacteria and total phosphorus in urban wetlands results.

A variety of other changes happen in urban streams when there is an increase in impervious cover. These changes can include stream channel enlargement, increased sediment loading due to more upstream erosion, dry weather water flow declines, a decline in the wetted perimeter of the stream at low flow, habitat loss, decline of water quality, reduction of aquatic diversity, and a decrease in wetland water quality and habitats.

Impervious Cover and Subwatershed Quality

As noted, stream research generally indicates that at about 10% impervious cover, sensitive stream elements are lost from the system. A second threshold appears to exist at around 25% to 30% impervious cover, where most indicators of stream quality consistently shift to a “poor” condition. “Sensitive streams” are defined to have a subwatershed impervious cover of zero to 10%.

These streams are high quality, stable, with excellent habitat structure, good to excellent water quality, and have diverse communities of fish and aquatic insects. “Impacted streams” have a watershed impervious cover ranging from 11% to 25% and show signs of degradation from erosion, channel widening, shifting stream water quality, and declining stream biodiversity.

Watershed Protection Techniques

In order to comprehensively protect and manage subwatersheds in the face of growth, there are eight generally accepted tools of watershed protection that could be put to work. Watershed protection is about making choices about what tools to apply, and in what combination. These eight tools can be applied throughout the subwatershed and in summary are:

Watershed Planning: Involves decisions on the amount and location of development and impervious cover, and involves choices about land use management techniques.

Land Conservation: Involves decisions about the types of land that should be conserved to protect a subwatershed.

Aquatic Buffers: Involves decisions on how to maintain the integrity of streams, shorelines, and wetlands, and to provide protection from disturbance.

Better Site Design: Involves decisions to help design individual development projects with less impervious cover which will reduce impacts to the streams and wetlands.

Erosion and Sediment Control: Involves decisions related to the clearing and grading stage in development and long term maintenance after development.

Stormwater Best Management Practices: Involves decisions about who, when, and where to provide stormwater management within a subwatershed or catchment area and which best management practices can best meet community and landowner objectives.

Non-stormwater Discharges: Involves decisions on how to control discharges from wastewater disposal systems and reduce pollution from household and industrial products. (For the Woodland Pond project, these tools are going to be less important.)

Watershed Stewardship Programs: Involves decisions and choices about how to promote private and public stewardship to sustain watershed management.

More Information on Low Impact Development Concepts

Low Impact Development (LID) is an innovative stormwater management approach with a basic principle that is modeled after nature: manage rainfall at the source using uniformly distributed decentralized micro-scale controls. LID's goal is to mimic a site's predevelopment hydrology by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to its source. Techniques are based on the premise that stormwater management should not be seen as stormwater disposal. Instead of conveying and managing / treating stormwater in large, costly end-of-pipe facilities located at the bottom of drainage areas, LID addresses stormwater through small, cost-effective landscape features located at the lot level. These landscape features, known as Integrated Management Practices (IMPs), are the building blocks of LID. Almost all components of the urban environment have the potential to serve as an IMP. This includes not only open space, but also rooftops, streetscapes, parking lots, sidewalks, and medians. LID is a versatile approach that can be applied equally well to new development, urban retrofits, and redevelopment / revitalization projects.

LID has numerous benefits and advantages over conventional stormwater management approaches. In short, it is a more environmentally sound technology and a more economically sustainable approach to addressing the adverse impacts of urbanization. By managing runoff close to its source through intelligent site design, LID can enhance the local environment, protect public health, and improve community livability - all while saving developers and local governments money. The need for such an approach has never been greater. Stormwater programs require that a wide array of complex and challenging ecosystem and human health protection goals be addressed. Many of these goals are not being met by conventional stormwater management technology, and communities are struggling with the economic reality of funding aging and ever-expanding stormwater infrastructure. The challenge of how to restore stream quality in watersheds that have already been densely developed is even more daunting. Simply relying on impervious reduction and/or conventional detention ponds to address these issues is not feasible, practical or sustainable. LID provides the key in its emphasis on controlling or at least minimizing the changes to the local hydrologic cycle or regime.

The LID approach includes five basic tools:

1. encourage conservation measures
2. promote impact minimization techniques such as impervious surface reduction
3. provide for strategic runoff timing by slowing flow using the landscape
4. use an array of integrated management practices to reduce and cleanse runoff
5. advocate pollution prevention measures to reduce the introduction of pollutants to the environment

69Town of Jewett Comprehensive Plan October 2007

See more information on this at www.lowimpactdevelopment.org or
<http://www.epa.gov/owow/nps/urban.html>

Appendix D: Conservation Subdivisions

An Illustration of Conservation Subdivision

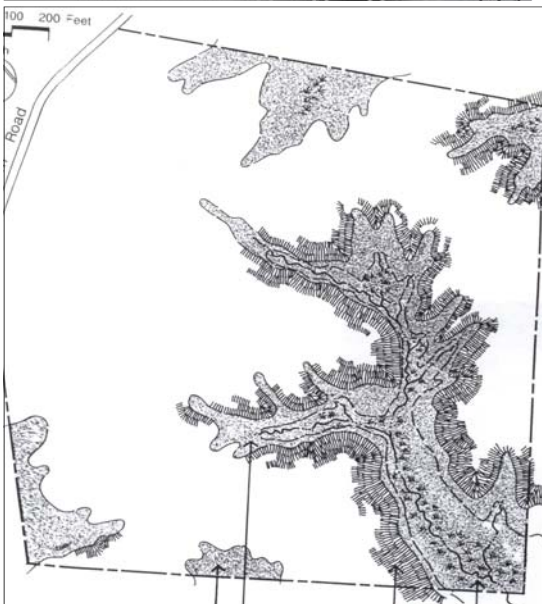
Example of a conservation subdivision (all illustrations from *Growing Greener*, by Randall Arendt, published by National Landmark Trust, 1999)

This lot layout yields 18 sites for building. The following figures illustrate how this site could be developed under a conservation design. Using the flexibility of the tool, there are numerous ways the site could be developed.

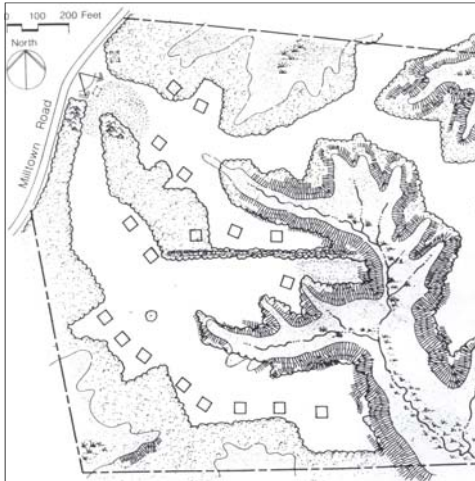
Four Steps of Conventional Subdivision Design



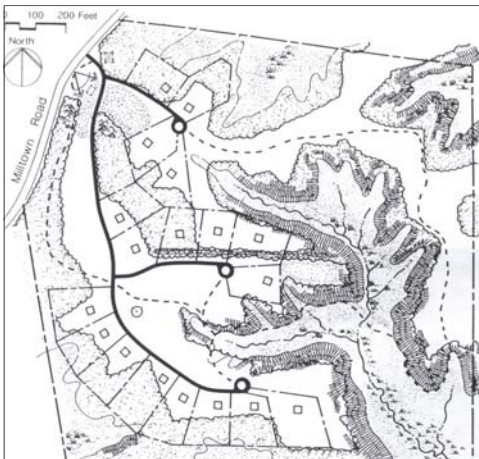
Lot layout of a site showing a typical subdivision where no open space is preserved.



Step 1 of Conservation Subdivision design: identify areas to be conserved. In this example, wetlands, steep slopes over 25% and a 100-year floodplain are identified as critical areas to be preserved on this parcel.



Step 2 of Conservation Subdivision design: locate house sites to maximize the number of homes with a view or direct access to the preserved areas of the parcel. Building envelopes or areas of disturbance are typically set.



Step 3 and 4 of Conservation Subdivision design: align streets and trails, and draw in lot lines. Streets should minimize new curb cuts from the access road. The last step is to draw in the lot lines. In this technique, lot lines are the least important task compared to a conventional subdivision where lot lines are drawn in first. Note that there are still 18 lots created in this subdivision at the same time that at least 50% of the site is preserved in an unbuilt condition.

Appendix E: Groundwater Study

GROUND WATER RESOURCE ASSESSMENT Phase 1 Town of Jewett, New York

Prepared for:

The Town of Jewett, New York

Prepared by:

**Alpha Geoscience
679 Plank Road
Clifton Park, New York 12065**

May 7, 2007

TABLE OF CONTENTS

1.0	INTRODUCTION	74
2.0	GEOLOGY	74
2.1	Bedrock	74
2.2	Surficial Deposits.....	75
3.0	AQUIFERS	75
3.1	Bedrock Aquifer.....	75
3.2	Surficial Glacial Till Aquifer.....	76
3.3	Surficial Sand and Gravel Aquifer.....	76
4.0	WELL YIELDS	76
5.0	AQUIFER RECHARGE.....	77
6.0	SUSTAINABLE WELL SPACING	78
7.0	DRILLING RECOMMENDATIONS.....	79
8.0	CONCLUSIONS AND RECOMMENDATIONS	80
	REFERENCES	81

TABLES

Table 1: Well Database

Table 2: Temperature and Precipitation Normals 1971-2000

FIGURES

Figure 1: Bedrock Geology

Figure 2: Surficial Geology

Figure 3: Topographic Relief

Figure 4: Recharge Zones and Soil Associations

1.0 INTRODUCTION

This report presents the results of the first phase of a ground water resource assessment for the Town of Jewett (Town), Greene County, New York, conducted by Alpha Geoscience (Alpha). The assessment is being conducted as part of the Town's Comprehensive Plan. It is our understanding that the information is intended for the Town to use as a guide for the planning of residential development within the Town and that the ground water resources will be tapped by individual wells at primary and seasonal residences. This first phase consisted of identifying and mapping the aquifers throughout the Town, evaluating the potential yield to individual wells within each aquifer and evaluating the recharge per unit area of each aquifer type. The evaluation was based on a review of published regional hydrogeologic data, well drilling reports from drillers, and our own experience in the Town and neighboring towns within the Catskill Mountains. The second phase of the assessment, if necessary, consists of the drilling and testing of a well, or wells, to further evaluate the Town's ground water resources.

Alpha obtained water supply well data for 75 wells within the Town. The sources of well data include USGS Bulletin GW-34 (Berdan, 1954), NYSDEC Well Completion Reports obtained via FOIL request, Titan Well Drilling, and Alpha's own project experience in the area. Yield was reported for all but six of these wells (Table 1). Other useful information obtained from the well logs included depth to bedrock and the nature of the unconsolidated deposits above bedrock.

2.0 GEOLOGY

The geology of the Town can be subdivided into the two basic categories of bedrock and surficial deposits. Bedrock is hard rock and surficial deposits are comprised of the soil, sand and gravel, clay, silt, and rocky mixtures of these that lie on top of the bedrock. Bedrock geology and surficial geology maps of the Town were provided to Alpha by Community Planning & Environmental Associates. These maps are based on the general geology from the Bedrock Geology Map of New York and the Surficial Geology Map of New York (Fisher et al., 1970, and Cadwell and Dineen, 1987, respectively). Alpha has made some minor revisions to the surficial geology map of the Town based on the well data reviewed for this study.

2.1 Bedrock

Bedrock is hard rock and surficial deposits are comprised of the soil, sand and gravel, clay, silt, and rocky mixtures of these that lie on top of the bedrock. The bedrock geology within the Town consists of interbedded shale, siltstone, sandstone and conglomerate of the Oneonta Formation, the Lower Walton Formation and the Upper Walton Formation (Figure 1). The rock types are interbedded and resemble a layer cake with each layer appearing as one of these different sedimentary rock types. Shale and siltstone are comprised solely of very fine-grained particles such as clay and silt. The sandstone consists of sand-sized grains that have been cemented together to form a rock and the conglomerate is sand and gravel that likewise has been cemented to form a hard rock. Bedrock is at the ground surface, or within approximately four feet of the ground surface, within roughly 34% of the Town area.

2.2 Surficial Deposits

The surficial geology within the Town primarily consists of sand and gravel, areas where bedrock is within several feet of the surface, and glacial till (Figure 2). The sand and gravel deposits primarily consist of glacial outwash sand and gravel, recent alluvial sediments and glacial kame deposits. Glacial outwash consists of stratified and well sorted material rich in sand and gravel that was washed out from the glaciers during their retreat at the end of the last ice age. Alluvial sediments consist of stratified silt, sand and gravel that currently are being deposited in the two larger valleys associated with Schoharie Creek and the East Kill. Kames consist of well sorted sand and gravel that was deposited against the side of a glacier. The kame deposits are typically found at higher elevations on the flanks of the valleys because the glaciers occupied the valleys. Drillers' well logs indicate that sand and gravel deposits may be up to 85 feet thick and are located primarily along the valley axes, except for the kame deposits.

Bedrock is found near the surface along the ridge tops, and glacial till covers the remaining area between the valley floors and the ridgetops. Glacial till is a mixture of clay, silt, sand, gravel and boulders that was deposited and compacted by overlying ice during the last glaciation. Glacial till has not been reworked and sorted by water. Well records indicate that glacial till may be as much as 169 feet thick within the Town.

3.0 AQUIFERS

An aquifer is a geologic formation that is saturated and permeable enough to yield sufficient quantities of ground water to wells and springs. All of the geologic units described in Section 2.0 contain saturated intervals that are permeable enough to yield water to wells within the Town; consequently, the geological units depicted in Figures 1 and 2 also represent the aquifers in the Town. The individual aquifers in the Town consist of bedrock, surficial deposits of sand and gravel, and surficial deposits of till. Each of these is discussed in the following sections.

3.1 Bedrock Aquifer

The current information indicates that bedrock is the aquifer most widely relied on within the Town. All but one of the 75 wells on Table 1 are completed in sedimentary rocks of the Oneonta Formation. The bedrock aquifer is the predominant aquifer within the Town, regardless of location or the type and thickness of surficial deposits above the bedrock, and despite the fact that 66% of the Town area is covered by surficial deposits thicker than four feet. Bedrock can be reached, and has been reached, by drilled wells nearly everywhere within the Town.

Ground water within the bedrock is generally contained within horizontal fractures concentrated along the contacts between the interbeds of shale, siltstone, sandstone and conglomerate, or within roughly vertical fractures that can cut through one or more of the interbeds. The ability of individual fractures to store or pass water depends on their size. The best water-producing fractures in the Catskills generally occur within the upper 200 to 300 feet of the land

surface and are more prevalent within the valleys than on the hillsides. The variability of bedrock fractures and the apparent random manner that they are encountered by residential wells provides the explanation for the variability in yields that is discussed within the “Well Yields” section of this report.

3.2 Surficial Glacial Till Aquifer

Approximately 55% of the Town is covered with glacial till. Glacial till has a high percentage of silt and/or clay and it is very compact because it was deposited beneath immense ice sheets; consequently, glacial till typically cannot store and transmit water at fast enough rates to supply reasonable amounts of water to a well. Only one of the 75 wells available for this analysis (well #145, Table 1) was completed in the glacial till aquifer. This well was reportedly a seven-foot deep, dug well completed in till sometime prior to 1954. The yield and status of this dug well is unknown.

3.3 Surficial Sand and Gravel Aquifer

Sand and gravel deposits in the Town comprise 11% of the Town area. Sand and gravel deposits, especially in stream valleys, commonly make good aquifers if there is a sufficient saturated thickness of the deposit. Sand and gravel aquifers have a high amount of interconnected pore space between grains and can store and transmit water readily. Although several well logs indicate that water was present in the sand and gravel, none of the wells in Table 1 were completed in sand and gravel deposits. There is not enough information currently available to assess the productivity of the sand and gravel aquifer within the Town. Shallow sand and gravel aquifers can be affected by surficial sources of contamination such as gasoline tanks or septic leach fields.

4.0 WELL YIELDS

The term well yield is a measure of how much water a well can be expected to produce for an extended period of time. The reported well yields that are provided in Table 1 range from 0.25 gallons per minute (gpm) to 100 gpm. Of the 69 wells for which yield was reported, 19% had yields less than 5 gpm, 49% had yields between 5 and 10 gpm, and 32% had yields greater than 10 gpm. There does not seem to be a pattern in the distribution of well yields amongst these 69 wells that would indicate that wells drilled in a particular physiographic setting have greater yields than another setting (Figure 2). Surficial cover type (till, sand and gravel, or thin soil above bedrock) is apparently not a strong factor in determining the yield of a bedrock well within the Town.

Well elevation also does not appear to be a controlling factor in determining well yield. Elevations within the Town range from approximately 1400 feet above mean sea level (amsl) in the Schoharie Creek valley at the western end of the Town to over 3000 feet amsl along the ridgetops. Approximately half the wells that yield greater than, or equal to, 10 gpm were drilled at elevations greater than 1900 feet amsl and half were drilled at elevations below 1900 feet amsl. A relief map, zoned by slope, is provided as Figure 3.

In general, it appears that bedrock wells in the Schoharie Creek valley have better yields than other physiographic areas of the Town; however, the information is far from conclusive. The sand and gravel deposits in the Schoharie Creek and East Kill valleys have not been explored sufficiently to ascertain the yield potential of these deposits. Well logs from the two valleys indicate that as much as 124 feet of sand and gravel may be present in some locations. The surficial kame sand and gravel deposit along Route 296 appears to be too thin (<10 feet) to be of any consequence as an aquifer (Figure 2).

5.0 AQUIFER RECHARGE

Aquifer recharge is the replenishment of ground water within the aquifer. The ability of the aquifer to be recharged can vary significantly as the result of a variety of factors that can be evaluated using a water budget analysis. A water budget analysis was performed by Alpha to identify differences in recharge within the Town. The Town was divided into different recharge zones based on this analysis.

The water budget is a method used to estimate the average quantity of water that recharges the ground water system on a per-year and per-minute basis. The premise of a water budget analysis is that precipitation falling on the land surface either percolates into the ground water system, enters the surface water system as runoff, or is evapotranspired. Evapo-transpiration is the combination of evaporation from the land surface and transpiration by plants. The volume of ground water recharge, runoff, and evapotranspiration in the Town depends on a variety of factors that include the average monthly temperature, average monthly precipitation, surface slope, vegetation cover, and specific soil properties. All of these factors were taken into consideration in estimating the average recharge, in inches per year, to the ground water system upon which the residential water supply wells in the Town rely. The average monthly precipitation and temperature normals (Table 2) were obtained from the Northeast Regional Climate Center for the National Oceanographic and Atmospheric Administration monitoring station in East Jewett (Station 302366). Soil properties were obtained from the Soil Survey of Greene County (Soil Survey) (Broad, 1993).

The water budget analysis performed by Alpha focused on three soil associations present within the Town (Figure 4). The goal of the analysis was to evaluate the amount of percolation that can be expected to recharge the bedrock aquifer system within each soil association. Each soil association is comprised of a different combination of soil types and each soil type has its own characteristics as described in the Soil Survey. The characteristics of the individual soil types that comprise the three soil associations were combined using a weighted-average approach to determine specific values, such as the soil moisture capacity and runoff coefficient, which are needed to complete a water budget analysis.

The water budget analysis resulted in different recharge values for each soil association (Figure 4), which represents a different recharge zone within the town. The recharge zones roughly are equivalent to the valley sand and gravels

(17.24 inches per year recharge), the ridgetops (12.44 inches per year recharge), and the till-covered slopes between the ridgetops and valley floors (10.86 inches per year recharge).

6.0 SUSTAINABLE WELL SPACING

The spacing of wells is an important consideration in managing the water resources in a region. The spacing of wells is often controlled by planning and zoning requirements for minimum lot sizes. The Town's existing zoning districts, with minimum lot sizes, are: Hamlet Residential, 1.5 acres; Rural Residential, 2.5 acres; Rural Conservation, 3 acres; and Conservation, 5 acres. Many factors must be considered in determining an appropriate minimum lot size with respect to water resource management. These factors include, but are not necessarily limited to, the following:

- The availability and variability of recharge to the aquifer(s) in the area, based on geologic, hydrogeologic, and climatic factors.
- The productivity and variability of the aquifer(s).
- The distance to the next nearest well and the type of well(s) in the area (i.e., residential, commercial, etc.).
- Existing and future land use and water use within an area.
- Seasonal increases in water usage due to landscaping, car washing, and gardening
- Setback requirements (leachfields, property boundaries, other wells, etc.).

The results of the water budget analysis provide some useful information for consideration with the other factors that influence the minimum lot size. The three Recharge Zones defined by the water budget analysis can be used to assess the lot sizes needed to sustain the ground water demands of a typical three-bedroom residence within each zone. A typical home requires approximately 110 gallons per day (gpd) per bedroom, or 330 gpd for a typical three bedroom home.

Most of the recent residential development within the Town is located within Recharge Zone 1, based on the location of the wells drilled in the Town since 2000, the year when well drillers were required by NYSDEC to begin submitting well completion logs. Recharge Zone 1 has an aquifer recharge rate of 10.86 inches per year (807.88 gpd per acre). Recharge Zone 1 roughly corresponds to the area covered by glacial till on the slopes between the valley floors and the ridgetop areas. An area of approximately 0.4 acres is needed in Recharge Zone 1 to sustain the typical residential demand of 330 gpd during an average year of precipitation. Recharge Zone 2 (12.44 inches per year; 925.41 gpd per acre) and Recharge Zone 3 (17.24 inches per year; 1282.49 gpd per acre) have higher recharge rates than Recharge Zone 1 and accordingly require less acreage to sustain typical residential water demands. Recharge Zone 2 and Recharge Zone 3 require approximately 0.36 acres and 0.26 acres, respectively, if recharge rates were the only criteria considered in determining the minimum lot size. The minimum lot sizes within the Town's current

79Town of Jewett Comprehensive Plan October 2007

Zoning Districts are all large enough to provide aquifer recharge at a rate that exceeds the daily demand of the typical three-bedroom residence.

Minimum lot sizes within each Recharge Zone need to be larger than just the minimum acreage necessary to provide sufficient recharge to the aquifer system. In addition to the above bullet list of factors, the known variability in well yields within the Town (0.25 gpm to 100 gpm), regardless of physiographic setting, is an indication that larger lot sizes than those indicated based solely on recharge rates, are appropriate. It is Alpha's opinion that a minimum lot size of five acres is sufficient to accommodate all of these concerns. The existing minimum lot size restrictions for the Town's zoning districts are likely sufficient to accommodate most of the above concerns; however, it is Alpha's recommendation that for lot sizes under five acres, one or more wells be drilled and tested to show that a sufficient water supply is present prior to initiation of construction.

Alpha also recommends that the Town adopt a policy that more extensive hydrogeologic testing be required in areas of high-density or large water-use development. Examples of such development include large subdivisions with numerous wells or commercial development with large water supply needs. The hydrogeologic testing requirements should be determined on a case-by-case basis and should consider the size (acreage), number of wells, anticipated average daily water demand, daily variation in water demand, water quality requirements, and the geologic and hydrogeologic setting of the project.

The Town may wish to adjust well spacing and lot sizes for new development surrounding high-quantity ground water users such as commercial enterprises, municipal buildings, schools, and health care facilities. Alpha recommends that site specific hydrogeologic analyses be performed for new, higher-demand ground water users to ensure that water resources are sufficient for the new facility and existing ground water users.

7.0 DRILLING RECOMMENDATIONS

The results of the first phase of the water resources evaluation performed by Alpha indicate that there is no need to conduct phase two drilling and testing of bedrock wells. The variability of bedrock well yields does not appear to correspond with any particular physiographic or stratigraphic setting within the Town. The existing well records indicate that new wells completed in bedrock will likely yield 5 gpm or greater throughout the Town. The actual yield in a particular well may be larger or smaller depending on site-specific factors. For example, 19% of the wells with reported yields in Table 1 had yields less than 5 gpm.

The available well records indicate that the yield potential of the sand and gravel aquifers within the East Kill and Schoharie valleys is unknown. Drilling logs for several wells listed on Table 1 indicate that a significant thickness of saturated sand and gravel exists within the two valleys. It is often easier and less costly for drillers to install bedrock wells, and disregard the yield potential of the sand and gravel encountered above bedrock. Some drillers

are not equipped, or do not have the experience to install the appropriate well screen for an efficient well in sand and gravel; however, thick sand and gravel deposits often produce abundant supplies of ground water for municipal, commercial, and industrial needs. Figure 2 shows the surficial sand and gravel deposits that exist above bedrock. Alpha recommends that a phase two investigation of those unconsolidated materials within the East Kill and the Schoharie valleys be undertaken to evaluate the water supply potential of these deposits.

8.0 CONCLUSIONS AND RECOMMENDATIONS

Alpha Geoscience performed the first phase of a ground water resource assessment for the Town of Jewett, New York. The first phase of this evaluation consisted of identifying and mapping the aquifers throughout the town, evaluating each aquifer's potential yield to wells and its recharge per unit area. The second phase will consist of the drilling and testing of a well, or wells, to further evaluate the Town's ground water resources. The evaluation was based on a review of published regional hydrogeologic data, well drillers' reports, and our own project experience in the Catskills. Information was obtained from 75 different wells within the Town. Aquifer recharge zones were defined and recharge rates were quantified via water budget analysis. Minimum lot sizes and well spacings were evaluated for each recharge zone. The major findings of the evaluation are listed below.

- Well yields in the Town generally appear to be satisfactory (5 gpm or greater) for residential development.
- Bedrock well yield does not directly correlate with the physiographic or stratigraphic setting in which the well is located.
- Bedrock is the primary source of ground water relied upon within the Town for domestic purposes.
- Well yields in the Town range from 0.25 gpm to 100 gpm.
- Three aquifer recharge zones within the Town were defined, corresponding to the valley floors, the ridge tops, and the intervening hillsides.
- The existing Town minimum lot sizes appear to be of sufficient area to provide adequate recharge for a typical three-bedroom residence. Due to the variability in well yields within the Town, however, Alpha recommends that a well be drilled on lots less than 5 acres, before construction, to demonstrate that an adequate water supply is available for the intended use.
- Alpha also recommends that the Town adopt a policy of requiring more extensive hydrogeologic analysis for new, higher-water demand projects to ensure the adequacy of the water supply and to assess potential impacts on existing ground water users.
- The yield potential of the sand and gravel aquifers in the Schoharie Creek and the East Kill valleys remain unknown. Alpha recommends that the phase two investigation of the Town water resources focus on the sand and gravel aquifers to evaluate the water supply potential of these deposits.

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Town of Jewett Comprehensive Plan October 2007

TABLE 1 Water Resources Evaluation

Well ID	Estimated Surface Elevation	Depth to Rock	Unconsolidated or Bedrock	Yield (GPM)	Surficial Geology
Hunter Test	G1354	1930	34	100	Till
		1540	47	100	Till
	G1466	1680	125	60	Till
	CH	2100	70	50	Sand & Gravel
	G1991	1680	67	50	Sand & Gravel
	G2098	2090	45	50	Till
	G1052	1570	90	40	Till
	143	1725	16	36	Till
	G1409	1790	77	30	Till
	G2092	1980	59	30	Till
	Bilash	1455	83	30	Sand & Gravel
	116	1730	8	20	Sand & Gravel
	132	1780	2	20	Thin soil over Bedrock
	G2157	1835	60	20	Till
	Slutsky	1650	48	20	Till
	126	2040	40	15	Till
	140	2000	15	15	Till
	G1164	2025	24	15	Till
	G1741	2240	112	15	Till
	G1868	1965	150	15	Till
	Merwin	1520	49	15	Till
	141	1880	60	11	Till
	106	1960	14	10	Till
	113	1800	4	10	Thin soil over Bedrock
	127	2060	25	10	Till
	G1861	1895	14	10	Till
	G2079	2100	66	10	Till
	125	1940	19	9	Till
	G1355	1660	105	8	Sand & Gravel
	G1704	1890	49	8	Till
	135	2040	107	7	Till
	G1185	1670	51	7	Till
	G1215	1860	30	7	Till
	G1410	2110	25	7	Sand & Gravel
	G1817	2210	14	7	Till
	G2139	1815	2	7	Thin soil over Bedrock
	119	1970	162	6	Till
	142	1920	55	6	Till
	G1061	1865	6	6	Sand & Gravel
	G1077	1490	49	6	Sand & Gravel
	G1665	1940	38	6	Till
	Cullen	1800	25	6	Till
	G2291	1990	18	5.5	Till
	111	1535	90	5	Sand & Gravel
	G1019	1635	176	5	Till
	G1107	1930	37	5	Till
	G1115	1765	34	5	Till
	G1124	1980	35	5	Till
	G1238	2060	56	5	Till
	G1319	1935	3	5	Thin soil over Bedrock
	G1527	1990	12	5	Till
	G1575	1945	25	5	Till
	G1764	2200	62	5	Till
	G1975	1965	55	5	Till
	G1984	1490	83	5	Sand & Gravel
	G2257	2100	60	5	Till
	G1028	2020	55	4.5	Till
	G1188	1745	20	4	Till
	G1159	1955	122	3.5	Till
	G1685	2085	3	3	Thin soil over Bedrock
	G1971	1830	30	3	Till
	O'Bryan	1710	9	3	Till
	G1251	1780	84	2.5	Till
	G2284	1975	4	2.5	Thin soil over Bedrock
	G1063	2070	24	2	Till
	137	2370	6	1	Thin soil over Bedrock
	G1753	2030	36	1	Till
	Ragucci	1480	139	1	Sand & Gravel
	G2278	1970	83	0.25	Till
	131	2080	2	unknown	Thin soil over Bedrock
	145	1495	>7	unknown	Till
	G1491	2060	12	unknown	Till

Town of Jewett Comprehensive Plan October 2007

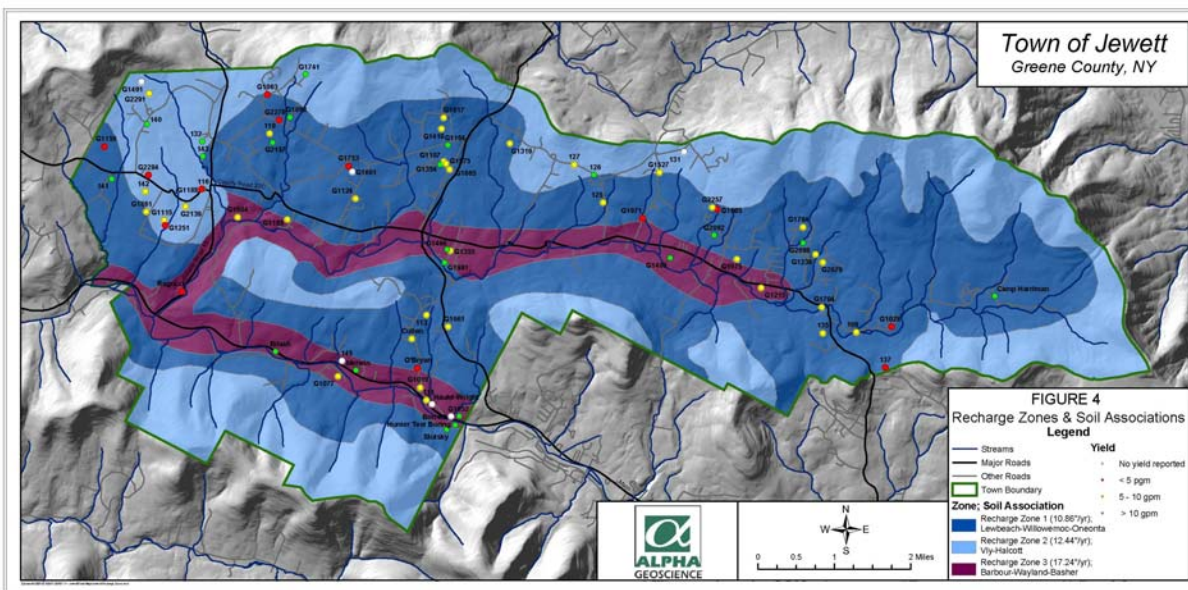
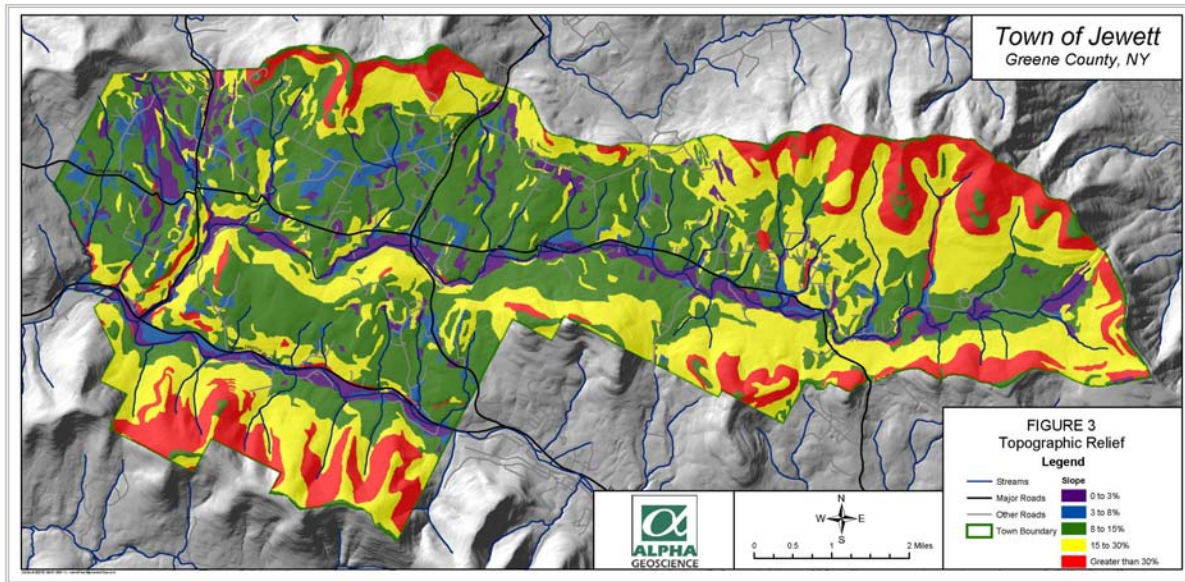
G1661	2030	50	Bedrock	unknown	Till
Borrelli		---	Bedrock	unknown	Sand & Gravel
Hauk/Wright	1535	---	Bedrock	unknown	Sand & Gravel

TABLE 2
Town of Jewett
Temperature and Precipitation Normals 1971-2000
East Jewett - NOAA Station ID 302366

Latitude = 42° 14'

Month	Temperature (°F)	Precipitation (inches)
January	19.8	4.29
February	21.2	2.87
March	29.6	4.45
April	40.7	4.67
May	52.1	4.82
June	60.3	4.29
July	64.6	4.18
August	62.7	3.50
September	55.5	4.62
October	45.4	4.46
November	36.1	5.17
December	24.9	4.09
Average	42.7	51.41

Town of Jewett Comprehensive Plan October 2007



Appendix F: Information on Wireless Networks

While DSL is not widely available, most carriers offer ISDN Basic Rate telephone service, and in some cases an ISDN-like flavor of DSL called ISDL. It can be offered in a lot of situations where DSL will not work, and is generally supported by most telephone switches since ISDN was part of the plan to digitize the telephone network in the 1980s.

A [rural telephone cooperative](#) or ad hoc community organization can easily muster the resources to build a broadband wireless network using off the shelf wireless networking gear.

While Wi-Fi networks are limited to a distance of a few hundred feet, this is because they generally use omnidirectional antennas. By refitting wireless access points and repeaters with directional antennas that throw signals in spot beams akin to flashlights, it is possible to greatly extend their range, sometimes to several miles.

A detailed discussion of wireless community networks can be found in [Rob Flickenger's book Building Wireless Community Networks](#). The general steps include:

- 1) Identify one or more locations in your community where someone can get reasonably priced broadband service (e.g. T-1, Cable, DS-3), pool resources across the user community to pay for the links.
- 2) Use directional antennas and repeaters to build a wireless mesh network out from these terrestrial links to sites that wish to share them. For example, by mounting parabolic antennas and repeaters on the sides of homes, one can relay a wireless link, in bucket brigade fashion from house to house, several miles along a sparsely populated valley.

Useful Links

[Rural Utilities Service](http://www.wcai.com/pdf/2003/ts9_purcellR.pdf): www.wcai.com/pdf/2003/ts9_purcellR.pdf
[FCC: Telecommunications Service for Rural America](http://www.fcc.gov/cgb/rural/): www.fcc.gov/cgb/rural/
[Rural Utilities Service](http://www.usda.gov/rus): www.usda.gov/rus
[Rural Broadband Access Loan and Loan Guarantee Program Application Guide and Rural Broadband Access Loan and Loan Guarantee Advance and Construction Procedures Guide](http://www.usda.gov/rus/telecom/broadband.htm): www.usda.gov/rus/telecom/broadband.htm