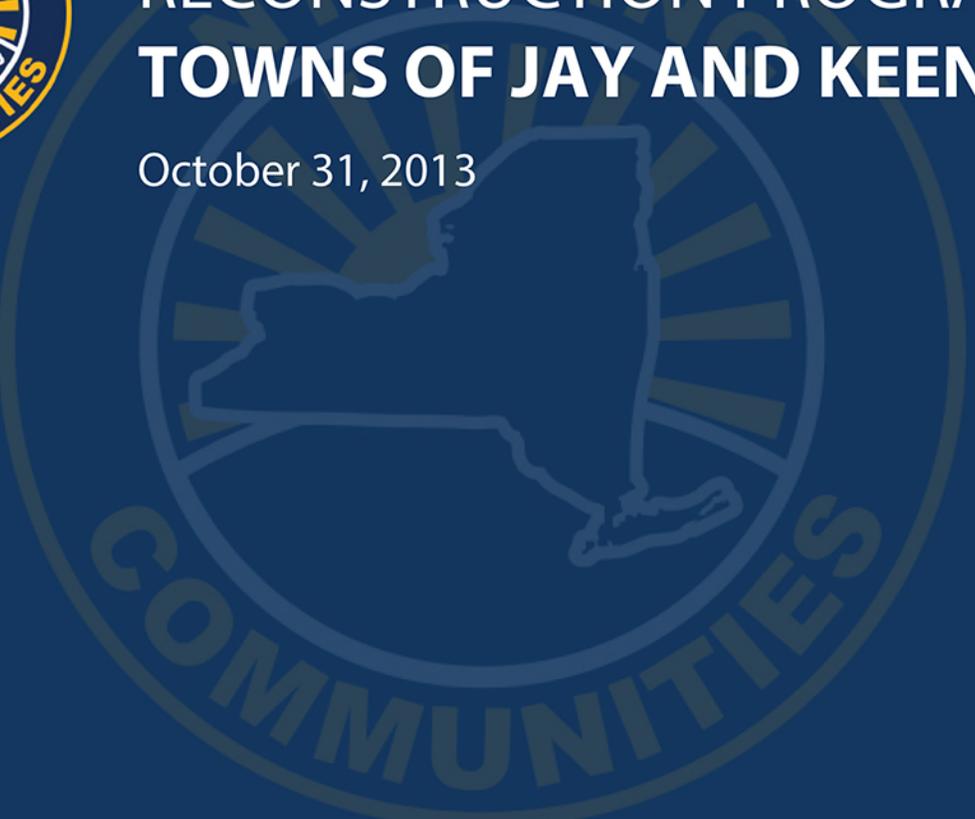




NEW YORK RISING COMMUNITY RECONSTRUCTION PROGRAM TOWNS OF JAY AND KEENE

October 31, 2013



This document was developed by the Jay and Keene Planning Committee as part of the NY Rising Community Reconstruction (NYRCR) Program within the Governor's Office of Storm Recovery. The NYRCR Program is supported by NYS Homes and Community Renewal, NYS Department of State, and NYS Department of Transportation. Assistance was provided by the following consulting firms: Ecology & Environment Inc. and River Street Planning, Inc.

FOREWORD

The New York Rising Community Reconstruction (NYRCR) program was established by Governor Andrew M. Cuomo to provide additional rebuilding and revitalization assistance to communities damaged by Superstorm Sandy, Hurricane Irene, and Tropical Storm Lee. This program empowers communities to prepare locally-driven recovery plans to identify innovative reconstruction projects and other needed actions to allow each community not only to survive, but also to thrive in an era when natural risks will become increasingly common.

The NYRCR program is managed by the Governor's Office of Storm Recovery in conjunction with New York State Homes and Community Renewal and the Department of State. The NYRCR program consists of both planning and implementation phases, to assist communities in making informed recovery decisions.

The development of this conceptual plan is the result of innumerable hours of effort from volunteer planning committee members, members of the public, municipal employees, elected officials, state employees, and planning consultants. Across the state, over 102 communities are working together to build back better and stronger.

This conceptual plan is a snapshot of the current thoughts of the community and planning committee. The plans will evolve as communities analyze the risk to their assets, their needs and opportunities, the potential costs and benefits of projects and actions, and their priorities. As projects are more fully defined, the potential impact on neighboring municipalities or the region as a whole may lead to further modifications.

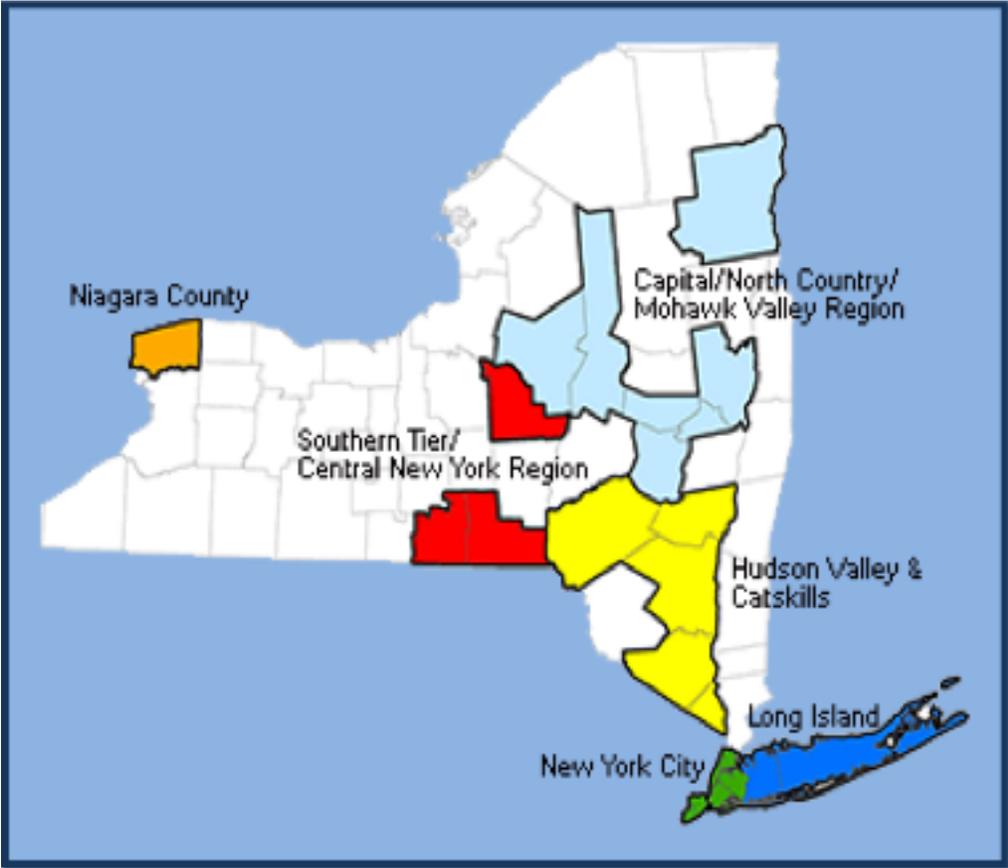
In the months ahead, communities will develop ways to implement additional strategies for economic revitalization, human services, housing, infrastructure, natural and cultural resources, and the community's capacity to implement changes.

Implementation of the proposed projects and actions found in this conceptual plan is subject to applicable federal, state, and local laws and regulations. Inclusion of a project or action in this conceptual plan does not guarantee that a particular project or action will be eligible for Community Development Block Grant – Disaster Recovery (CDBG-DR) funding. Proposed projects or actions may be eligible for other state or federal funding, or could be accomplished with municipal, nonprofit or private investment.

Each NYRCR Community will continue to engage the public as they develop a final plan for community reconstruction. Events will be held to receive feedback on the conceptual plan, to provide an understanding of risk to assets, and to gather additional ideas for strategies, projects and actions.

October 31, 2013

New York Rising Communities





Executive Summary

The Towns of Jay and Keene consist of several small hamlets situated along the Ausable River in the middle of the Adirondack Park, the largest publicly protected area in the contiguous United States. Like many communities in the North Country Region of New York, the Towns of Jay and Keene originally developed along the banks of a river, and so parts of each town are susceptible to flooding.

Historically, flooding has predominantly occurred from excessive runoff from heavy rains. Flooding has also occurred from ice jams on the rivers and from rain added to heavy snowmelt. On August 29, 2011, Tropical Storm Irene caused extensive damage throughout all 18 towns in Essex County. Within a week, Tropical Storm Lee hit the same area, compounding the damage already caused by Irene. Flooding was primarily caused by the powerful Ausable River and its tributaries which swelled up and spilled over the riverbanks and into people's homes and businesses.

Damage which resulted from the storm includes:

- Many residents completely lost their homes and possessions
- Businesses in both towns suffered major losses of inventory as well as revenue from being closed over the Labor Day weekend, one of the busiest tourist weekends, following Irene
- A large section of State Route NY 73 was washed out, isolating the hamlet of Keene and other hamlets and severely disrupting the flow of tourists, local, and commercial traffic to the hamlets and the surrounding Lake Placid and Tri-Lakes region
- Numerous roads, bridges, culverts, and other critical infrastructure were damaged
- Popular cultural assets in the High Peaks Wilderness Area – such as the bridge over the Marcy Dam – were washed out or otherwise destroyed.
- Many hiking trails were closed due to storm damage, resulting in fewer tourist visits
- Ecological impacts such as damage to fish habitat, riparian corridors, and more

A large amount of the damage has been repaired, including sections of Route 73 that were washed away during Irene; however, the recovery is not over. Portions of structures teetering over eroded river banks can still be observed. Other damage, including the emotional and financial toll on residents and businesses, is harder to see but no less important. While the communities did a remarkable job of coming together during and after the storms, the experience has also highlighted vulnerabilities that need to be addressed before the next flood. These vulnerabilities include:

- Critical infrastructure located in the floodplain
- Many culverts are undersized or blocked by debris and sediment, contributing to flooding
- Shelters, which provide food and shelter for emergency workers as well as community residents, have limited capacity
- Emergency responders struggle with volunteer recruitment and providing personnel with training such as swift water rescue
- Roadways providing access to pockets of residents and important facilities like the Town of Jay water treatment plant are at risk from culvert failure and flooding

- Limited knowledge and awareness by responders of best practices for in-stream emergency work can result in efforts that have negative impacts to river or stream functioning, trout habitat and other ecosystem services

The effects of Tropical Storms Irene and Lee on this part of New York State combined to create the worst disaster the region has seen in the past century. Despite these impacts, the Towns of Jay and Keene are committed to rebuilding, while also acknowledging that flooding of this scale could occur again, and that severe, widespread flooding is a major concern for the future.

“Reducing future flood hazards, planning for flood safe neighborhoods, meeting the needs of our residents and building a strong economy with employment opportunities, vibrant main streets, world class recreation and sustainable farms and forestry are all important to the future viability and vitality of our communities”

(Adapted from the Towns of Jay and Keene Community Vision Statement, 2013).

Preliminary project ideas are presented in Chapter 5 – a few examples are presented in the Table below.

Towns of Jay and Keene Example Project Ideas
Complete restoration of John’s Brook and identify other reaches that may need restoration
Install water gage in Keene to provide advance warning of flooding
Evaluate structural measures to mitigate flooding
Redesign culverts to allow for adequate water flow as well as fish passage and fisheries habitat enhancement
Implement a stormwater management program
Develop a helicopter landing zone outside of flood prone areas
Explore public/private community foundation opportunities
Evaluate options for relocation of vulnerable assets outside floodplains
Implement flood/riparian/fluvial awareness program/ training for communities to better understand river dynamics
Evaluate reinforcement or other changes to NY 73 in the most vulnerable areas
Undertake additional responder training and equipment



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Acronyms, Abbreviations, and Key Terms

ADLUDP	Adirondack Park Land Use and Development Plan
APA	Adirondack Park Agency
ARC	American Red Cross
NYRCR	New York Rising Community Reconstruction
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
NYSDOS	New York State Department of State
NYSDOT	New York State Department of Transportation
NYSHCR	New York State Housing and Community Renewal
Working Group	NYSDOS Uniform Approach Working Groups



1.0 Overview

1.1 NYRCR Program Overview

Through the New York Rising Community Reconstruction (NYRCR) Program, New York State (NYS) is helping communities like the Town of Jay and the Town of Keene impacted by Tropical Storms Irene and Lee and Hurricane Sandy to rebuild their communities and to Build Back Better. The Program supports community-driven planning that considers current damage, future threats to community assets, and the community's economic future. In keeping with the National Disaster Recovery Framework, NYRCR Plans consider the needs, risks, and opportunities related to assets in the following areas: Community Planning and Capacity Building, Economic Development, Health and Social Services, Housing, Infrastructure, and Natural and Cultural Resources¹. Through a successful planning effort, the communities will be positioned to obtain funding to implement the Plan and improve their community's future.

A primary objective of the NYRCR program is making communities more resilient to future storms. Planning to become more resilient is based, in part, on understanding and managing risk. As part of the program, communities will undertake an evaluation of the factors that produce risk – hazard, exposure, and vulnerability. This will help communities develop effective reconstruction strategies, guide project and investment decisions, redirect land use, and gradually transition at-risk assets from high risk conditions to an acceptable lower level of risk.

1.2 Community Overview

The Towns of Jay and Keene are located in Essex County, within New York State's Adirondack Park and the North Country Region of upstate New York. The trailheads of some of the most popular hiking and climbing in the Adirondack Park are located in Keene along Route 73, and while not directly located within the Towns of Jay and Keene, the internationally renowned Olympic Training Center is located less than 20 miles away, in the Village of Lake Placid. Tourism is a major contributor to the local economy, with significant seasonal swings in the population.

The Town of Keene, which has approximately 1,200 year-round residents, nearly doubles during the summer months, when those with summer homes live in the Region. Keene encompasses the 5,344-foot Mount Marcy, which is the point with the highest elevation in New York State. Although Keene is approximately 165 square miles in size, more than half of the area is too rugged to have ever been settled. The Town has three hamlets – Keene, Keene Valley, and St. Huberts. The town is located on the East Branch of the Ausable River and is served by a small airport, Marcy Field Airport. State Route 73 runs through town and is the southern gateway to the High Peaks from Exit 30 of the Adirondack Northway, as well as a primary means of ingress and egress to the entire area. Additionally, NYS Route 9N, from Spruce Hill to Elizabethtown, is the primary access route from NYS Route 87 (the Northway) to Keene during a flood event. Route 9N is also considered a gateway to the Champlain Valley.

The Town of Jay, which encompasses a total area of 67 square miles, has approximately 2,500 year-round residents and is located in the northern part of Essex County. Jay is bordered by the Town of Keene to the south. There are three hamlets in the Town – Upper Jay, Jay and part of Au Sable Forks. The Town is

¹ For more information and definitions of these functions, see: <http://www.fema.gov/recovery-support-functions>



situated along the East Branch and adjoining the West Branch of the Ausable River, and is the northern gateway to the High Peaks region from Exit 34 of the Adirondack Northway. The Jay Covered Bridge, which is located in the Hamlet of Jay, is the only remaining covered bridge in the Adirondacks.

1.3 Summary of Storm Impacts

The Towns of Jay and Keene are geographically situated along the powerful Ausable River, which also has many brooks and streams connected to it, some of which are significant in size. The major source of flooding for both communities is the Ausable River and its tributaries. Historically, flooding has occurred from excessive runoff from heavy rains, from ice jams, and from rain added to heavy snowmelt. Flooding from runoff has been exacerbated by changes to the watershed. For example, over twenty new landslides have left scars along tributaries to the Ausable River, which may shorten the time in which the river reaches and exceeds the flood stage.

Although residents of the communities acknowledge that flooding is a regular and increasingly more frequent occurrence, Tropical Storms Irene and Lee impacted the area unlike any other weather event in the last century.

Tropical Storms Irene and Lee were felt in a variety of ways, for example:

Regional Impacts:

- Numerous roads, bridges, culverts, and other critical infrastructure were impacted in Jay and Keene. For example, a large section of State Route NY 73 was washed out, isolating the hamlet of Keene and other hamlets
- Dams on local farms were destroyed, and the resulting surge on Styles Brook directly contributed to the loss of multiple homes near Route 9N
- New and already significant bank and soil erosion and landslides were exacerbated
- Important habitat and other ecosystem services were impacted

Economic Impacts:

- Several businesses lost thousands of dollars-worth of inventory and/or were forced to close for a prolonged period of time. For example, State Route NY 73, parts of which were washed out, is a major thoroughfare and considered the lifeblood of the Town of Keene and surrounding hamlets

Human Impacts:

- Some community residents were temporarily or permanently displaced due to flood damage of their homes
- Many residents lost irreplaceable family heirlooms and other valuable possessions

Ecological Impacts:

- Damage to fish habitat and riparian corridors from both the storm event and subsequent emergency repair work which was performed

1.4 Geographic Scope of the Plan

This NYRCR Plan is intended, among other objectives, to help make each community more resilient to flooding from major storm events. As such, the consultant team worked with planning committee



members from the Town of Jay and Keene to determine an appropriate geographic scope for the plan, particularly with regard to flood risk.

To determine the geographic scope, a large poster size map of the Town of Jay and Town of Keene was presented at the second planning committee meeting on September 4th, 2013. A discussion was led to determine consensus on the geographic scope.

The committee felt that given the limited FEMA flood mapping available, it was important to look at an area beyond the 500 year flood plain boundary (where mapped). As well, flooding from streams and tributaries is not captured in the 100 or 500 year flood plain so it was deemed important to include tributaries in the scope.

Based on the discussion with the committee, the resulting geographic scope of this plan includes three focus areas: Community Needs and Opportunities, Risk Assessment, and Reconstruction Strategies and Projects. Communities needs and opportunities will address the area within the political borders of the Towns of Jay and Keene. In addition, the risk assessment and flood mitigation components will focus on a quarter mile buffer on either side of the 500 year flood plain with a vertical height up to ten feet. Key tributaries of the Ausable River will also be identified.

Additionally, strategies or projects outside of the political boundaries of Jay and Keene but located in the watershed which feeds the Ausable River may also be included if they have an impact on flooding and community resiliency in Jay and Keene.

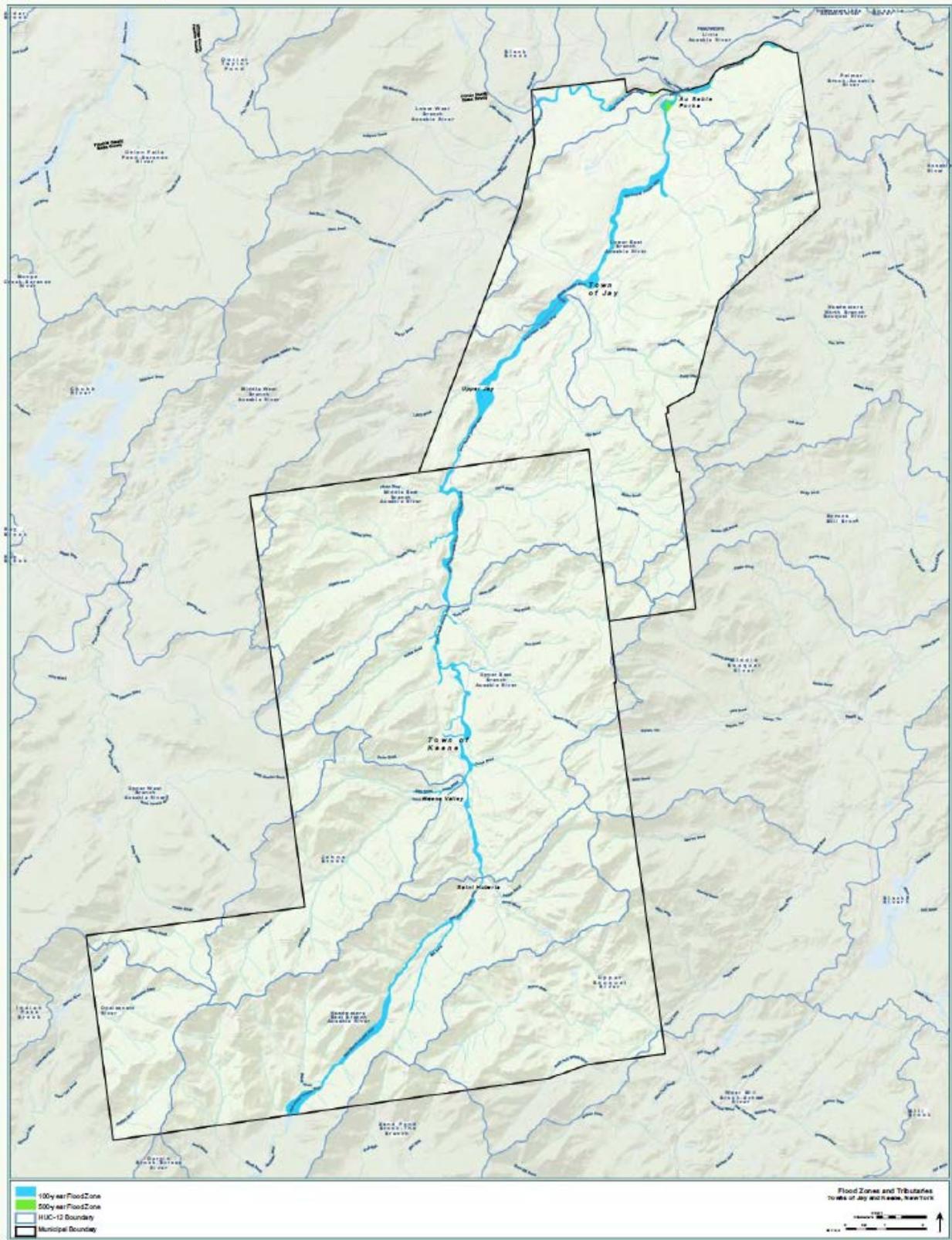


Figure 1-1 Flood Zones and Tributaries



1.5 Critical Community Issues

Based on discussions with community leaders, background research, and early results from the Needs and Opportunities Assessment, the following is a preliminary list of major issues identified in the Towns of Jay and Keene.

Community Planning & Capacity Building

- Neither town has a local land use zoning ordinance
- Local capacity and expertise to implement zoning is limited
- Neither town has storm water pollution prevention or storm water management ordinances; as well, local capacity and expertise to implement storm water pollution prevention is limited
- Some evacuation sites are located within flood-prone areas
- The community and in particular visitors are not trained and aware of flood risk and individual preparedness
- Volunteer firefighter recruit retention has decreased over time and although the towns have personnel certified in swift water rescue, there is a need for more training, specialized swift water rescue equipment, and examination of the potential purchase of an airboat for the region
- The towns are located within the Adirondack Park, and so some development activities are subject to restrictions based on Adirondack Park Agency regulations and land use classifications²
- Responders do not have the knowledge of river systems that would allow them to respond to flood events in the most appropriate way

Housing

- A study of land availability and land use classification is needed to determine the feasibility of shifting development and critical assets away from flood-prone areas. This may require the evaluation of options for hamlet expansion

Infrastructure

- The vulnerability of the area's few major roadways to flooding risks cutting off the communities and limiting the resources and services that can be accessed during an emergency
- Undersized culverts or culverts blocked with sediment, branches and other debris have resulted in flooding
- The Town of Jay's primary water treatment plant is at risk of being cut off due to flooding of its only access road

Natural & Cultural Resources

- Culverts and erosion have limited the amount of suitable fish habitat
- The Walton Bridge was destroyed during Irene, segmenting an important fitness trail
- Development in upland areas increases runoff during storm events
- There is still restoration work needed in stretches of river and stream, including almost half a mile of John's Brook
- Much of the historic and architectural fabric of the hamlets lie in the flood prone areas
- The floodplain is confined at various locations due to development
- Sandy soil is highly erosive, leads to over-widened channels and results in an entrenched river disconnected from floodplain

² For more information: <http://apa.ny.gov/Documents/Guidelines/CitizensGuide.pdf>



Economic Development

- Local businesses have managed to recover after recent flooding, but there is concern another major storm will force some businesses to close permanently.

Health & Social Services

- The towns have an aging population but little appropriate housing. Housing will become increasingly important.
- There is limited capacity for sheltering during an emergency.

1.6 Community Vision

The community vision for the Towns of Jay and Keene was developed by the planning committee with vision statements from existing plans and future planning efforts in mind. It is the hope of the planning committee that this vision statement can be adopted or modified for future planning efforts.

The Towns of Jay and Keene are resilient communities. The Ausable River runs through our towns and links our communities together. Keeping the Ausable clean and ensuring a healthy river system for recreation is important for our economy and the health and welfare of our citizens and visitors alike. Reducing future flood hazards, planning for flood safe neighborhoods, meeting the needs of our residents and building a strong economy with employment opportunities, vibrant main streets, world class recreation and sustainable farms and forestry are all important to the future viability and vitality of our communities.

Guided by this vision, the Towns' NYRCR plan integrates economic, environmental and social priorities in order to preserve our unique natural and cultural assets and identify ways to improve the resilience of both of our communities.

1.7 Public Engagement and the Conceptual Plan

As part of the effort to gather community input, a Public Engagement Sub-Committee has been formed to develop a strategy for soliciting input from the community. Three primary Public Engagement strategies have been designed for the Towns of Jay and Keene to inform and shape the Conceptual Reconstruction Plan: a series of public meetings, engaging community residents in a community story-sharing campaign, and a tour of selected project locations.

Each strategy is designed to gather input and comments from the public and to allow the community to share their experiences in a structured way that would highlight the concerns and priorities which exist in the Town of Jay and the Town of Keene. Specific details of the Jay and Keene Public Engagement Strategy are discussed in Appendix A.

Planning committee meetings have been open to the public; a second planning committee meeting held on October 7th included a number of non-committee members who were able to participate in a discussion of the geographic scope, the community vision, community assets and needs and opportunities. A community vision has been developed based on language used in visions from other local planning



documents and with input from the co-chairs. This vision was presented at the committee meeting. The first public meetings were held on October 16th in Keene and October 17th in Jay and were facilitated in an interactive, open house format. Multiple activity stations were set up that provided informational materials to the public regarding what has been developed to date by the planning committee:

- Geographic scope
- Community vision
- Identified existing plans and projects
- Community assets
- Needs and opportunities

Each of these activity stations allowed the public to share their thoughts on these topics through one-on-one discussion with the committee members and other planning partners, by filling out work sheets and comment sheets with feedback about the process, and by directly marking up maps and posters which showed the geographical area and community assets.

The community story campaign will document Jay and Keene’s resilience planning process and highlight the steps taken to select solutions appropriate for their particular community. Drop boxes have been placed at both the Jay and Keene Town Halls that will allow individuals to share written, personal stories of how flooding impacted them, pictures taken of flooding during and after the event, and other comments related to the program. In addition, the public will be able to email their stories, comments and project ideas.

The walking tours of the Towns of Jay and Keene allowed committee members and local stakeholders to identify areas that were impacted by flooding and to share project ideas. The results of the walking tours have been captured in photographs and a field log book and will be integrated into the mapping that accompanies the final plan.

Table 1-1 Schedule of Committee and Public Meetings in Jay and Keene

Meeting	Location	Date/Time	Attendees	Purpose
Committee Meeting #1	Au Sable Forks FD, Au Sable Forks	9/4/13 11 am	NYSDOS, Co-Chairs, Committee Members, Planning Team , Public	Introduce the committee to the program and discuss the schedule.
Committee Meeting #2	Keene FD, Keene	10/7/13 5-7 pm	NYSDOS, Co-Chairs, Committee Members, Planning Team	Discussion with Committee of Geographic Scope, Asset Inventory, Community Vision
Public Meeting #1 (Keene)	Keene FD, Keene	10/16/13 5-7 pm	NYSDOS, Co-Chairs, Committee Members, Planning Team , Public	Introduce the overall program to the public. Solicit feedback on the Geographic Scope, Asset Inventory, Community Vision
Public Meeting	Jay Community	10/17/13 5-7 pm	NYSDOS, Co-	Solicit input on the



Table 1-1 Schedule of Committee and Public Meetings in Jay and Keene

Meeting	Location	Date/Time	Attendees	Purpose
#1 (Jay)	Center, Au Sable Forks		Chairs, Committee Members, Planning Team, Public	content of the Conceptual Plan
Committee Meeting #3	Jay Community Center, Au Sable Forks	10/21/13 5- 7 pm	NYSDOS, Co-Chairs, Committee Members, Planning Team	Review Conceptual Plan and develop strategies and key projects.
Committee Meeting #4	Jay Community Center, Au Sable Forks	11/13/13, 5-7 pm	NYSDOS, Co-Chairs, Committee Members, Planning Team	Review Conceptual Plan and develop strategies and key projects
Public Meeting #2 (Combined-Jay and Keene)	Jay Community Center, Au Sable Forks	11/13/13	NYSDOS, Co-Chairs, Committee Members, Planning Team, Public	Review results of background research and field investigations; discuss initial project ideas

Planning Committee Member affiliations for both Jay and Keene include:

- Planners at the county and town level
- Residents and business owners in areas affected by flooding
- Individuals who played a role in community planning and studies (e.g., North Country Regional Sustainability Plan, Essex County Soil and Water Conservation District Stream Report, and Ausable River Watershed Management Strategy, Essex and Clinton counties, New York)
- Representatives from non-profit organizations

The Conceptual Plan will be discussed at the second public meeting on November 13, 2013. The final plan will be based on feedback from the community, NYSDOS, Committee Co-Chairs and Committee Members. This is a community plan – by the residents of Jay and Keene. The Plan will show how the community wishes to reshape itself and become resilient to floods.

2.0 Asset Inventory

2.1 Goal of the Inventory

The goal of the Asset Inventory is to assemble a complete description of the assets located within or outside of the NYRCR Community whose loss or impairment due to flooding and storm events would compromise any essential social, economic or environmental functions or critical facilities.

Assets are places or things where economic, environmental and social functions of communities take place, or are critical infrastructure required to support those functions. Critical assets, as defined by



FEMA³, include, but are not limited to, those things which create or extend the useful life of structures or facilities:

- Such as those which produce, use or store highly volatile, flammable, explosive, toxic or water-reactive materials;
- Such as hospitals and nursing homes, and housing for the elderly, which are likely to contain occupants who may not be sufficiently mobile to avoid the loss of life or injury during flood and storm events;
- Such as emergency operation centers, or data storage centers which contain records or services that may become lost or inoperative during flood and storm events; and
- Such as generating plants, and other principal points of utility lines.

2.2 Methodological Approach

Assets were classified into six categories in accordance with the National Disaster Recovery Framework. Assets are classified by these categories and the subcategories below to facilitate the Risk Assessment, the Needs and Opportunities Assessment, creation of Project Ideas, and the Cost-Benefit Analysis. The following tables provide an example of how assets within the community were classified.

Table 2-1 Types of Assets

Types of Assets	
Asset Class	Asset Example
Economic	Office buildings, business and industrial parks, manufacturing, warehouses, storage facilities, grocery, restaurants, banks, lodging, storefronts, downtown center, seasonal/tourism destinations
Health and Social Services	Schools, health care, day care, elder care, emergency operations, government and administrative services, media and communications, police, fire and rescue
Housing	Single-family and multi-family dwellings, supportive housing/group homes, senior housing and affordable housing
Infrastructure Systems	Pedestrian, bicycle and vehicular ways, transit, bridges, airports, rail, ports, ferries, gas stations, water supply, storm water, wastewater, solid waste and recycling
Natural and Cultural Resources	Natural habitats, riverine systems, wetlands and marshes, recreation facilities, parks, public access, open spaces, agricultural areas, religious establishments, libraries, museums, historic landmarks, performing arts venues
Vulnerable Populations	Assets predominantly providing services for people with disabilities, low and very-low income populations, the elderly, young children, homeless and people at risk of becoming homeless

Some assets within the first five classes may also serve Vulnerable Populations. As a result the inventory spreadsheet has been reformatted so that Vulnerable Populations are identified in a separate column, in addition to their identification in the other five asset classes. An asset is defined as a critical facility if it meets FEMA’s definition for a critical facility. If it does not meet FEMA’s requirements but is still significant then it is classified as a “Significant Facility” rather than a “Critical Facility”.

³ Page 6-18: http://www.fema.gov/pdf/floodplain/is_9_complete.pdf



Several data sets used to populate the preliminary asset inventory were received from NYSDOS and consisted of data sets from NYS Department of Environmental Conservation, Insurance Services Office, Inc., National Oceanic & Atmospheric Administration, NYS Department of Health, NYS Department of Transportation, NYS Division of Homeland Security & Emergency Services, NYS Division of State Police, NYS Office for People With Developmental Disabilities, and NYS Office of General Services. Additionally, data was incorporated from the NYS Department of Environmental Conservation (2009), ESRI (2010), National Park Service (2011), NYS Education Department (2000), Platts (2009), Google Earth searches (2013), and feedback received at committee and community meetings.

These assets were geocoded and mapped and presented to the planning committee during the second Committee Meeting held on October 7, 2013. A list of assets corresponding to the points on the map was provided to the committee. The committee conducted an initial “truthing” by identifying inaccuracies and adding additional assets. These corrections and additions were made to the asset maps. The new maps and updated asset list were then presented to the community at the first public meetings on October 16 and 17, 2013. Stakeholders were able to write on the asset lists and draw directly on large asset maps that were displayed. Input from the committee and public has resulted in removal of assets such as private wells, updates such as the recently constructed Keene Fire Department and additions such as local businesses.

2.3 Asset Inventory Results

An initial analysis of assets indicates that many of the identified assets are clustered along the Ausable River and in Au Sable Forks, Upper Jay, Keene Valley, and Saint Huberts. Assets along the Ausable River are expected to fall within the quarter mile buffer surrounding the 500 year floodplain. These population centers contain historic main streets, emergency services and government buildings. Much of the geographic area of Jay and Keene is part of the Adirondack Park Forest Preserve and contains few assets. The preliminary assets are displayed on a series of maps in Appendix B.

The Asset Inventory will be analyzed as part of the Risk Assessment to identify assets that are particularly vulnerable to impacts from future flood events.



3.0 Risk Assessment

The risk assessment process will consist of the identification of community assets that are vulnerable to flood-related impacts. This will support project identification and prioritization.

3.1 Data Collection

As part of data collection, E & E reviewed existing FEMA floodplain models and flood insurance studies. The initial intent was to re-run existing models using more recent data to produce updated floodplain maps. The results of the data collection effort are described below.

In general, FEMA flood maps are available for only some of the flood-impacted areas in Jay and Keene. This is a significant limitation.

Town of Keene

No hydrologic or hydraulic studies are available for the Town of Keene. Furthermore, topographic information available within these communities is limited to USGS 10 meter grid cells. A field stream survey is required to accurately model the stream profiles and existing conditions and verify the geometry of any infrastructure within the channels that has the potential to impact stream flow.

Town of Jay

A model is available from FEMA for the East Branch of the Ausable River and was produced in 2002. This model will be obtained; however no LIDAR is available for this project area so updates cannot be performed. The existing model may not reflect current stream geometry, in particular changes since Tropical Storms Irene and Lee. A field stream survey is recommended to accurately model the stream profiles and existing conditions and verify the geometry of any infrastructure within the channels that has the potential to impact stream flow.

No other tributaries or streams have models available.

Available Data Summary

HEC-RAS models produced as part of FEMA's floodplain mapping program do not exist for many of reaches in the study area. Therefore, E & E proposes that an alternative method be used for assessing flood risk.

3.2 Risk Assessment – Proposed Process

E & E proposes the following method for conducting the risk assessment, taking into consideration available data and its limitations.

First, E & E will conduct comprehensive background research to understand previous studies conducted in the watershed, in particular those that addressed flooding, stream channel dynamics, or infrastructure.

The existing 100 and 500 year flood plain boundaries were used to identify vulnerable assets. However, input from committee members and the public has indicated that current flood plain data does not



encompass many of the areas in the community that were flooded in recent storms, largely due to the limited coverage of the FEMA maps.

In order to supplement the existing flood plain maps, the planning team will meet with planning committee members and other informed members of the public to visit locations in Jay and Keene that have flooded. Where possible, these locations will be mapped using GPS so that the extent of flooding can be documented for use in the risk assessment. If necessary, a survey crew may be used to develop elevation lines that can be used to create a GIS layer to map flood extent during Tropical Storm Irene and Lee. Note that this mapping is historic in nature and cannot be considered a prediction of the extent of future flooding. Assets falling within this flood extent layer will also be highlighted in the risk assessment.

Furthermore, the E & E team will conduct limited windshield surveys of the impacted areas to identify vulnerable infrastructure and geomorphic features that could impact future flooding and riverine habitat.

Additionally, if structural measures are proposed to mitigate flooding, field surveys will be conducted to survey the stream channel 500 feet up and downstream of the proposed measure. Structural measures may consist of:

- Replacement or retrofits of bridges, culverts or other channel crossing structures;
- Removal or relocation of structures, buildings, or channel encroachments that affect water levels within the floodway or floodway fringe, as defined by FEMA;
- Channel and floodplain modifications; and
- Floodplain improvements or reclamation.

Survey results will be used to develop a HEC-RAS model to evaluate the impact of the proposed structural measure.

3.3 Risk Assessment Results

Based on the results of the Asset Inventory and Risk Assessment analysis, E & E will develop maps identifying critical assets and other significant assets. These maps will identify assets with vulnerability that can be classified as Extreme, High, Moderate, or Not Applicable. The results of this mapping exercise will inform the identification of strategies and projects.

4.0 Needs and Opportunities Assessment

4.1 Community Profile

4.1.1 History, Geography and Land Use

The Towns of Jay and Keene are located in Essex County within the Adirondack Park. The Park was created in 1885, well after the Towns of Jay and Keene were established, and is the largest publicly protected area in the contiguous United States (Adirondack Park Agency 2013). Approximately 43 percent of land within the park boundaries is owned by the State. The study area includes the Ausable River along with numerous streams and tributaries and is home to Mount Marcy, the point with the highest elevation in New York State.



The Town of Keene, located on the East Branch of the Ausable River, was established in 1808 by splitting off parts of the Towns of Jay and Elizabethtown. The Town of Jay situated along the East Branch and adjoining the West Branch of the Ausable River, was established in 1798 when it separated from the Town of Willis borough. The presence of the Adirondack Mountains and Ausable River originally shaped and limited where development could occur when Jay and Keene were first settled. The establishment of the Adirondack Park and the forest preserve and later the creation of the Adirondack Park Land Use and Development Plan (APLUDP) have influenced development to minimize its impact on the park's natural resources.

As is the case with many towns in the area the summer population swells, although Keene attracts visitors year round with its excellent recreational opportunities. Historically the area has attracted artists, authors and philosophers who came for the summer months and stayed in guesthouses and hotels. That tradition continues today in the presence of the Au Sable Club, a private club located in Saint Huberts in the southern part of town. The Club offers support to the town and shares assets in emergencies.

The Town of Jay is the northern gateway to the High Peaks region. It encompasses 67 square miles of river bottomland and rolling hills, which rise to the peaks of the Jay Range to the east in the town of Lewis (highest elevation, 3623 feet). The Town includes the hamlets of Upper Jay, Jay and the Essex County portion of Au Sable Forks, which is at the confluence of the East and West Branches of the Ausable River. The Jay Covered Bridge in the Hamlet of Jay, restored in 2007, is the only remaining covered bridge in the Adirondacks. For a quarter century (from 1954-1979), the Hamlet of Upper Jay was known for the Land of Makebelieve, an amusement park created by Arto Monaco. The facility closed in 1979 after extensive flood damage from the Ausable River. Some of the best fly-fishing in New York State has historically been found on the East Branch of the Ausable River but this has changed over time due to impacts from development and other human activities as well as storm damage.

The Town of Keene is the southern gateway to the High Peaks. The Town has three hamlets-Keene, Keene Valley, and Saint Huberts. Historically, the area had numerous lumber and iron industries; however, raw product exportation was difficult with little access to transportation routes. Business began to grow around 1820, when the Town established sawmills, forges and gristmills along the Ausable River to process materials locally. Today, the town's hamlets are clustered with bed and breakfast accommodations, small shops and eateries. The trailheads of some of the most popular hiking and climbing in the Adirondack Park are located in Keene along Route 73.

4.1.2 Demographic Profile

The U.S. Census reported 3,152 residents in the Towns of Jay and Keene in 2010. This represents just 8.5 percent of the total population of Essex County. Between 1990 and 2010, the Town of Jay saw its population grow by 11.7 percent while the Town of Keene grew 21.7 percent. These growth rates were significantly higher than the county and state rates. While the population has grown in these communities, there has been a shift to smaller households, including single parent households that may require more resources during and after a natural disaster.



The Town of Jay has a population density of 37 persons per square mile and the town of Keene has an even lower population density of 7.1 persons per square mile. The small size and rural nature of these towns means that storms and flooding can have a much larger impact on the overall community, cutting areas off and overwhelming local resources.

The median age in Jay (45.6) and Keene (51.1) is significantly higher than New York State’s median of 38. The aging population also creates additional challenges during emergencies. This older population may have specialized medical and transportation requirements. An older population may also limit the number of individuals able to volunteer and serve in an emergency response role.

Please note that the demographic impact of the flood events (temporary or permanent population loss, business disruption, and lack of discretionary spending, among others) is not reflected in the census statistics that form the basis for this demographic profile.

Table 4-1 Population Change

Municipality	1990 Census	2000 Census	2010 Census	Percent Change 1990-2010
Town of Jay	2,244	2,306	2,506	11.7%
Town of Keene	908	1,063	1,105	21.7%
Essex County	37,152	38,851	39,370	6.0%
New York State	17,990,455	18,976,457	19,378,102	7.7%

Source: 1990, 2000 and 2010 Census.

4.1.3 Community Planning and Capacity Building

Several plans and processes in place address the community’s ability to implement storm/disaster recovery activities and to plan to mitigate the effects of future storms and disasters. In addition, plans have been developed that address general environmental concerns and economic development. The majority of plans and studies have taken place at the county and regional level:

- Essex County Pre-Disaster Multi-Jurisdictional Hazard Mitigation Plan (2011) -
- Essex County Comprehensive Emergency Management Plan
- Hamlets 3 (2010)
- Adirondack Park Regional Assessment Project (2009)
- Ausable River Watershed Management Strategy (2008)
- Ausable River Watershed Management Plan (in process)
- Au Sable Forks Downtown Revitalization Plan
- Fish Passage and Connectivity in the Ausable Watershed using GIS Prioritization and Field Assessment Tools (2012)
- High Peaks Waterfront Revitalization Strategy (2010)
- North Country Regional Economic Development Council Strategic Plan
- North Country Regional Sustainability Plan (2013)
- Town of Keene Master Plan (2003)
- Essex County Soil and Water Conservation District Stream Inventory Report (2012)
- Ausable River Study (1994-1995)
- The Little Porter Watershed Study (1999, Carol Treadwell)
- Opportunities For Action: An Evolving Plan For The Future of the Lake Champlain Basin (2010)

The findings from these studies and plans and other resources will be incorporated into the Final Plan where relevant.



4.1.4 Economic Development & Local Economy

The mountains, trails, waterways and other natural resources of the Adirondack Park have contributed to making outdoor recreation a significant component of the local and regional economies. Tourists visit to the region to enjoy great hiking, biking, paddling, fishing and camping, snowmobiling and skiing opportunities. While tourism is an important part of the local economy, the largest employment industries in both Jay and Keene are the education, health care and social services. The unemployment rate is similar to other parts of Upstate New York.

While both Towns have a median household income lower than the NYS average, the per capita income in Jay and Keene is slightly higher than the NYS average, in part due to smaller average household size. Poverty rates (Table 4-2) are also generally lower than the NYS average, but still indicate that there is a low income population that may be particularly vulnerable during a storm event and through recovery. These low income individuals may have difficulty finding affordable housing and may also lack the financial resources to quickly obtain essential food and shelter in the event that their homes are severely damaged or destroyed.

Table 4-2 Household Income and Poverty Rate Comparison

	Median Household Income	Per Capita Income	Families Below Poverty Level	Individuals Below Poverty
Town of Jay	\$52,896	\$32,669	6.0%	9.0%
Town of Keene	\$48,929	\$31,770	5.4%	11.7%
Essex County	\$45,626	\$26,046	8.2%	12.4%
New York State	\$56,951	\$31,796	11.0%	14.5%

Source: 2007-2011 US Census Bureau American Community Survey (ACS) 5-Year Estimate.

4.1.5 Health and Social Services

Health services for the Town of Keene are provided by Mountain Health Center located on Route 73 in Keene. This is a community health center that is part of the larger Adirondack Health Center that provides health care to residents throughout the Adirondacks. Emergency services are provided in Lake Placid and Saranac Lake, 20 and 35 minutes respectively from Keene and 25 and 45 minutes respectively from Jay. The most direct route for Keene to access emergency care is via Route 73, which was heavily impacted by Tropical Storms Irene and Lee.

Additionally, a volunteer ambulance service is available in Au Sable Forks and the Keene Fire Department also provides ambulance service. Keene Valley Neighborhood House is an assisted living facility for seniors and is located on Main Street in Keene Valley. The Essex County Department of Social Services provides support for low income residents, children and older adults.

Vulnerable populations such as community members who are physically or mentally disabled, non-English speakers, medically or chemically dependent, homeless, frail elderly and/or children often rely on health and social services provided in their communities for day to day living. In the event of a natural disaster, access to these services can be limited and create life threatening situations for some individuals. These groups may lack economic resources and may need greater assistance in getting out of harm's way.



Table 4-3 shows the percentage of some of these populations in the Jay and Keene. Older adults make up the largest vulnerable population group in Jay and Keene.

Table 4-3 Vulnerable Population

	Town of Jay	Town of Keene	Essex County
Total Population	2,506	1,105	39,370
Area in Square Miles	67.7	156.0	1,916
Population Density/Sq. Mile	37.0	7.1	20.5
>65 years old	17.3%	23%	18.1%
% minority population	3.1%	2.5%	7.1%
Median Income	\$52,896	\$48,929	\$45,626
% individuals below poverty	9.0%	11.7%	12.4%
Total households	1,064	526	16,262
Households with less than \$25,000 income	25.0%	23.4%	24.4%
Linguistically isolated individuals ⁴	0.5%	3.3%	1.1%

4.1.6 Housing

Of the 2,739 housing units in Jay and Keene, only 1,590 were reported as occupied in the 2010 Census, indicating a significant number of seasonal residences, especially in Keene where the vacancy rate was over 50% in 2010. In both Jay and Keene, the housing stock is comprised of mostly single family units, and most occupied homes are owner-occupied.

The location, type, quality and age of housing are critical factors in how it will withstand flooding and will inform the decision to repair a house after it has been damaged. The Town of Keene has an aging housing stock, with 40.4 percent of structures built earlier than 1940. In comparison, only 29.0 percent of Jay’s housing was built in 1939 or earlier.

Table 4-4 Housing Characteristics

Municipality	Total Housing Units	% Total Occupied Units	% Owner-Occupied Units	% Renter-Occupied Units
Town of Jay	1,547	1,064 (68.8%)	852 (80.1%)	212 (19.9%)
Town of Keene	1,192	526 (44.1%)	419 (79.7%)	107 (20.3%)
Essex County	25,603	16,262 (63.5%)	11,989 (73.7%)	4,273 (26.3%)
New York State	8,108,103	7,317,755 (90.3%)	3,897,837 (53.3%)	3,419,918 (46.7%)

Source: 2010 Census.

A lack of affordable rental and owner occupied housing in Jay and Keene may limit home ownership opportunities and force low income individuals to live further from employment and health and social services. This may also make it difficult for these individuals to remain in the community if their home is damaged. Rental units make up approximately 20 percent of occupied housing units in both towns. Median gross rent is considered to be affordable in Jay; however, over 51 percent of renters in Jay and 58 percent in Keene are considered cost burdened and have combined housing related expenses that exceed

⁴ A linguistically isolated household who speaks English less than “very well.”



30 percent of their gross income. Despite the high vacancy rates in Jay (31.2%) and Keene (55.9%), seasonal, recreational or occasional housing makes up 81.2 percent of these vacant units in Jay and 95 percent in Keene. The affordability ratio for homeownership in Jay (3.0) and Keene (5.6) is significantly higher than the national standard of 2.0.

Table 4-5 Cost Burdened Households, 2010 – Estimate

Municipality	Homeowners	Renters
Town of Jay	24.3%	51.7%
Town of Keene	29.4%	58.2%
Essex County	27.6%	45.2%
New York State	34.6%	52.3%

Source: 2007-2011 US Census Bureau American Community Survey (ACS) 5-Year Estimate.

Table 4-6 Housing Rental Index, 2009 Estimated

Municipality	Median Gross Rent	Median Household Income	Affordable Rent (30% of Average Monthly Income)
Town of Jay	\$757	\$52,896	\$1,322
Town of Keene	\$920	\$48,929	\$1,223
Essex County	\$702	\$45,626	\$1,141
New York State	\$1,025	\$56,951	\$1,424

Source: 2007-2011 US Census Bureau American Community Survey (ACS) 5-Year Estimate.

Table 4-7 Housing Affordability

Municipality	Median Value	Median Household Income	Affordability Ratio
Town of Jay	\$159,000	\$52,896	3.0
Town of Keene	\$275,000	\$48,929	5.6
Essex County	\$150,600	\$45,626	3.3
New York State	\$301,000	\$56,951	5.3

Source: 2007-2011 US Census Bureau American Community Survey (ACS) 5-Year Estimate

4.1.7 Infrastructure Systems

State Route 73 and State Route 9N provide the primary access to the Towns of Jay and Keene and individual hamlets. State Route 86 provides additional access to Jay from Wilmington to the west. Flooding of these key roadways has forced communities to rely on private unpaved roads and in some cases cut the hamlets off from each other entirely.

Public water is available in the hamlet of Au Sable Forks, Jay and Upper Jay as well as the hamlets of Keene and Keene Valley. Water treatment plants operated by the town of Jay became inaccessible during flooding due to impassable roads. This has limited the town’s ability to provide safe drinking water following a flood.



Broadband and cell coverage is limited in this region. Plans are underway to upgrade emergency services communication in Essex County, but current equipment is inadequate and departments have relied on hand signals in some situations.

Important infrastructure systems include:

- State Route 73 runs through Keene and is the southern gateway to the High Peaks from Exit 30 of the Adirondack Northway.
- State Route 9N runs through Jay and Keene and is the primary north-south road.
- The Au Sable Forks Water district receives water from three wells on Grove Road and serves 900 people.
- The Jay and Upper Jay water districts receive their water from two wells adjacent to the water treatment plant on Nugent Road and serve a combined 734 people.

4.1.8 Natural and Cultural Resources

The region's varied topography and network of streams and rivers are both an asset and contributing factor to flooding in the communities. The existing natural and cultural resources will be described in further detail based on the results of field investigations and interviews with key stakeholders.

- The East and West branches of the Ausable River travel north through the High Peaks region of the Adirondack Mountains converging at Au Sable Forks and continuing to Lake Champlain.
- The River is designated as a Wild, Scenic and Recreational River, a program operated under the New York State Environmental Conservation Law that recognizes and protects waterways with "outstanding scenic, ecological, recreational, historic and scientific values."
- The Ausable Watershed is 60 miles long and is traversed by 94 miles of river beginning in the High Peaks region of the Adirondack Mountains. The watershed is approximately 512 square miles.
- The East and West branches of the Ausable River are home to a world class trout fishery.
- Jay and Keene are located in the "High Peaks" region of the Adirondack Park.
 - Forty-eight percent of land in the park belongs to all the people of New York State and is constitutionally protected to remain a "forever wild" forest preserve.
 - The Jay Covered Bridge in the Hamlet of Jay, restored in 2007, is the only remaining covered bridge in the Adirondacks.
 - The trailheads of some of the most popular hiking and climbing in the Adirondack Park are located in Keene along Route 73.

4.2 Community Needs

In this section, preliminary community needs and related gaps, weaknesses, and constraints are identified. Opportunities to address these needs are presented in the Strategies and Projects section in Chapter 5. The needs assessment is still underway and so the content below remains preliminary.

4.2.1 Community Planning and Capacity Building

- The Town of Jay does not have an updated Comprehensive Emergency Plan.
- The Towns of Jay and Keene do not have local zoning ordinances and stormwater management ordinances, which could lead to approval of development that does not adequately consider erosion and flooding concerns.
- The Ausable River experiences frequent flooding events, often leaving residents vulnerable.



- Hydraulic and hydrologic models are unavailable for parts of the Ausable River and all of its tributaries.

4.2.2 Economic Development

- Keene and Jay’s significant percentage of low and moderate income residents and residents living below the poverty line limits both towns’ ability to absorb losses and enhance resilience to hazards. Higher income levels contribute to making communities more resilient and speeding recovery more quickly due to greater insurance coverage, savings, and social safety nets.
- Financial and technical support is needed for both the growth of businesses and recovery after a flood.
- Jay and Keene residents rely on access to surrounding communities for some services; additionally, tourists and other visitors are a major contributor to the local economy. Disruption of local roads due to flooding cut the community off from its economic lifeblood.
- Economic development is largely built around access to excellent fishing, hiking, biking, rafting, and other recreational and cultural activities – this presents an opportunity and also a risk.

4.2.3 Health and Social Services

- Growing numbers of seniors, some with physical or mental impairments and many lacking private transportation, are especially vulnerable and require a higher level of care during a flood event and recovery.
- Individuals living in poverty (11.7% of Keene’s and 9% of Jay’s population) who are dependent on social services are already economically and socially marginalized and require additional support in the post-disaster period. Special needs populations (infirm, mentally or physically disabled, homeless), are disproportionately affected during disasters.
- The age of residents may require more emergency services for seniors in the face of a flood event.
- Access to emergency care is vulnerable to disruption from flooding on the few roadways connecting Jay and Keene with emergency medical care.

4.2.4 Housing

- The value, quality, density, and age of Keene and Jay’s residential construction affect potential losses, recovery, and likelihood that owners will rebuild. The relative dearth of affordable housing limits relocation options for residents opting into the buyout program.
- As a tourist destination there are many housing units rented out seasonally and not kept for year-round residents, which puts pressures on the housing market, particularly for renters. Housing prices for single family homes on the market are out of reach for the average local resident. Affordability ratios in Jay and Keene exceed affordability standards.
- A high percentage of Town renters in Jay and Keene who are cost burdened may lack access to information about financial aid during recovery. In some cases renters may lack sufficient shelter options when housing becomes uninhabitable or too costly to afford.
- The age of residents, particularly in Keene suggests a fast approaching or existing need for senior housing. In some cases, senior housing may consist of a more intense use of land that would require it to be located on land classified as Hamlet in the APLUDP.
- Homes on Sheldrake Road and Intervale Avenue in Au Sable Forks are also subject to flooding.



4.2.5 Infrastructure Systems

- Many buildings in Keene and Jay have aging septic systems; these may require maintenance or replacement.
- There are bridges within the Hamlet of Au Sable Forks that are in the center of the Hamlet and closure of those bridges could potentially impact or severely limit ingress/egress for residents directly situated in that area if those bridges were closed due to flooding.
- As stated in the Essex County Soil and Water Conservation District Stream Inventory, sites with large erosion banks, blockages, and/or pile ups may be located farther from infrastructure presently, but if nothing is done for these sites, more damage in the future may occur.
- Not all culverts and bridge crossings impacted by sedimentation, undermining, log jams, and other impacts have been remediated.

4.2.6 Natural and Cultural Resources

There are multiple opportunities to improve riverine and riparian habitat, improve water quality and fish habitat, and mitigate flooding described in existing local studies and pending resources such as the Ausable Watershed Management Plan. These will be described in greater detail in the Final Plan. Additionally:

- Ice jams frequently occur at Stickney Bridge in the Town of Jay in both the winter and spring seasons, contributing to flooding which occurs annually at the bridge, resulting in residents who live on the south side of the bridge becoming isolated from the Town.
- The last remaining building at the Magical Land of Makebelieve was destroyed as a result of flood waters generated by Tropical Storm Irene. The site remains a key waterfront site, but flood hazard issues need to be factored in when considering a reuse for the site.
- Cleanup of culverts and streams after flooding has occurred without adequate consideration of the natural stream bed and fish habitat.

5.0 Reconstruction Strategies and Projects

In this Chapter, broad reconstruction strategies and specific projects are presented to help the Towns of Jay and Keene recover and rebuild in a way that increases resilience and prosperity. Please note that these are preliminary strategies that will be expanded upon and adjusted based upon ongoing data collection, field surveys, and community input, including interviews with key stakeholders.

5.1 Preliminary Strategies and Projects

This preliminary list of strategies and projects was developed based on a review of existing plans and input from the planning committee. The project team will evaluate this list, identify gaps and, and refine and build upon the list of projects to be contained in the final plan.

Strategies are presented in bold, with specific projects bullet underneath.

5.1.1 Community Planning and Capacity Building

Develop local zoning and stormwater management ordinances to mitigate erosion and sedimentation and protect riparian buffers and floodplains



- Adopt storm water pollution prevention ordinances to manage erosion and sedimentation from construction areas, particularly on steep slopes.
- Enhance local laws to protect and enhance riparian corridors and floodplains.

Enhance education and outreach on flood awareness and stream management

- Prepare educational material related to riparian buffers, sediment transport, river habitat, etc.
- Design and implement community training program on flood awareness.

Develop capacity of emergency and support services to respond during a natural disaster.

- Provide volunteer firefighters with swift water training.
- Evaluate recruitment strategies to increase number of volunteer firefighters.
- Increase capacity of kitchens at community centers and fire halls to ensure adequate capacity to support recovery staff and residents needing food during an extended emergency.
- Obtain airboat for both towns along with equipment and staff training.
- Identify and prioritize unmet emergency service needs to effectively respond to future disasters.
- Develop a directory of agencies and local expertise.
- Develop evacuation routes and implement signage accordingly.
- Institutionalize Post Flood Emergency Response training for local and County DPWs as well as contractors hired locally.
- Support potential public/private community foundation opportunities.

Complete planning efforts to build flood resilience.

- Complete flood hazard mitigation plans for hamlet areas and river stretches between hamlet areas.
- Complete Comprehensive Watershed Management Plan
- Complete Geomorphic Assessments for the Upper West and East Branches.

5.1.2 Economic Development

Note: this section will be expanded greatly to reflect planned discussions with local experts in early November.

Support “Main Street” revitalization in hamlets.

- Seek grant funding to provide “main street revitalization” opportunities such as façade and building stabilization and upgrades, streetscape/gateway improvements, wayfinding.
- Expand sidewalk network in Au Sable Forks connecting the elementary schools to school and town recreational facilities and adjacent neighborhoods to improve safe pedestrian access to the schools and town recreational facilities.
- Replace the footbridge (pedestrian bridge) from the end of Gristmill Road to Hulls Fall Road.

Increase business retention and expansion in communities.



- Increase marketing of Jay’s cultural and recreational tourism amenities within regional marketing efforts through websites and printed material.
- Establish a microenterprise program to better assist prospective and existing businesses with technical assistance, financial assistance for business development and relocation opportunities to the Town of Jay.
- Evaluation opportunities to flood proof commercial buildings to minimize risk of flood damage to businesses.

Enhance trout habitat in the East Branch of the Ausable River in order to promote recreation-based tourism and improve ecological functioning.

5.1.3 Health and Social Services

Increase availability of assisted living within communities.

- Convert the Holy Name School in Au Sable Forks to an assisted living facility.

5.1.4 Housing

Evaluate options for relocation of vulnerable housing outside of floodplains and development of new housing in areas that are not prone to flooding.

Evaluate elevation of existing housing where appropriate.

Promote senior and affordable housing development.

- Encourage downtown senior housing and other affordable housing development in Au Sable Forks in areas outside of the floodplain either through the adaptive reuses of existing buildings or new infill and identify possible sites or structures appropriate for senior housing.

5.1.5 Infrastructure

Note: this section will be expanded greatly to reflect planned discussions with local experts in early November as well as field surveys.

Implement structural and non-structural flood mitigation measures to protect life and property from flooding, including strategies that reconnect the river with the floodplain.

- Evaluate the scientific, engineering and economic feasibility of mitigation projects identified by the community, including:
 - Installation of large flood capable culverts that let the river into Marcy field (area is town and private land), the big field at the foot of Spruce Hill, and along Route 73 past the Shaw Bridge. Note that flooding of private land requires landowner permission.
 - Resizing of the culvert at Nugent Road.
 - Replacement or adaptation of priority culverts identified in the 2012 “Connectivity” study.



- Installation of a large capacity culvert along Route 73 past the Shaw Bridge (in Forest Preserve land).
- Opportunities for floodplain recovery and wetland restoration.

Expand cell access/broadband access to ensure communication is possible during emergency situations.

Improve the transportation network.

- Repair Gulf Brook Bridge and Little John's Brook Bridge, and evaluation opportunities for elevating bridges to avoid flooding.
- Support traffic calming and pedestrian crossings on NYS Route 73 by working with NYS DOT and to designate pedestrian crossing areas as needed for pedestrian safety in the hamlets - particularly in the vicinity of the Town's senior housing.
- Repair Hulls Falls Road.
- Rebuild section of RT 73 coming down from Chapel Pond to withstand major flooding while also considering sediment transport and hydrological functioning including impacts on habitat.
- Identify opportunities to upgrade bridges, enhance roadways and improve culverts throughout the study area.
- Identify helicopter landing sites outside of flood prone areas.

Evaluate the reintroduction of hydroelectricity on the Ausable River.

- Conduct a collaborative feasibility study of alternative sources of energy including hydroelectric generation using existing dams in the Towns of Jay, Wilmington and Keene.

Improve flood warning systems.

- Install river gage in Keene to alert downstream communities of flooding in advance.
- Maintain funding for existing river gage.
- Install or upgrade river gage to measure both gage height and discharge.

5.1.6 Natural and Cultural Resources

Enlarge and improve culverts to support fish habitat connectivity and reduce flooding and incorporate fisheries habitat enhancement in culvert resizing.

- Identify priority culvert locations for redesign to allow for fish passage.

Address stream bank erosion and restore river and stream beds to natural state using natural channel design. This could include:

- Restoration of John's Brook.
- Restoration of Styles Brook.
- Restoration of eroding stream banks along the Ausable at sites identified in geomorphic studies as priorities using natural channel design

Improve stream corridor management.



- Implement identified projects
- Educate community leaders and staff

Redevelop arts and cultural assets to support tourism and local recreation.

- Support the redevelopment of the Tahawus Lodge into an arts-oriented center
- Redevelop the swimming hole at Marcy Field

Enhance public access for water-based recreation and tourism.

- Replace footbridge from the end of Gristmill Road to Hulls Falls Road with pedestrian bridge.
- Re-establish swimming hole at Marcy Field
- Develop a park on the Ausable River in Keene Valley as part of the “Restoration of East Branch Ausable River at Rivermede Farm” project. (High Peaks Waterfront Revitalization Plan 2011)
- Explore the development of a robust set of bikeway and snowmobile trails connecting the hamlets. Establish the trails above flood levels so they are available during emergencies.

Where possible, incorporate green infrastructure and low-impact development techniques into public and private development or redevelopment projects.

5.2 Project Prioritization

Please note that these are preliminary strategies that need to be updated based upon the result of planned interviews, field surveys, and ongoing background research.

Projects will be prioritized by the planning committee by identifying projects that are critical to immediate and long term needs. The committee will also consider the feasibility and cost of projects.

6.0 Implementation Strategy and Schedule

The implementation strategy and schedule will be developed based on the results of the project prioritization process.

The Final Plan will include a description of the steps needed to implement the strategies and projects identified in the plan. The strategies and projects will be organized into a master plan containing a phased implementation schedule with short, medium, and long term actions.

The implementation schedule can be used to verify that tangible progress is made in implementing the identified reconstruction strategies. The schedule will assign responsibility for specific projects to individuals or organizations and will establish timelines for each project, as appropriate. Each strategy will be divided into discrete projects each of which will be given a specific target date for initiation and completion. When developing the schedule, consideration will be given to which projects can be acted upon immediately versus over the medium and long term. For those determined to be long term, clear criteria will be established for when implementation will or should occur.



6.1 Regional Coordination

Extensive regional coordination initiatives are already underway or have been completed in recent years. These will be described in the Final Plan.

7.0 Appendices



Appendix A: Public Engagement Strategy



Town of Jay and Town of Keene Public Engagement Strategy

Purpose: The Town of Jay and Town of Keene public engagement strategy has been developed to inform the public and key stakeholders about the New York Rising planning process. The intent is to understand public concerns regarding severe weather events and flooding and to formalize opportunities for the public to provide input into strategies, programs and actions identified to mitigate the effects of flooding.

Preliminary Stakeholders Identified:

- Affected property and business owners and residents of the Towns of Jay and Keene
- Essex County Soil and Water Conservation District
- Essex County Planning Office
- Jay and Keene School Districts
- Essex County Department of Public Works Highway Division
- Town of Jay Highway Department
- Town of Keene Highway Department
- Fire Departments
- Ausable River Association
- Adirondack Park Agency (APA)
- The Nature Conservancy
- Trout Unlimited
- U.S. Fish and Wildlife Service
- Wildlife Conservation Society
- The American Red Cross (ARC)⁵
- NYS Department of Transportation (NYS DOT)
- NYS Department of Environmental Conservation (NYS DEC)

Strategy 1: Public Engagement Subcommittee

Purpose: The public engagement subcommittee will help guide the public engagement strategy and ensure appropriate outreach is undertaken to facilitate stakeholder input. The subcommittee will be responsible for determining the date and location of future meetings, distributing flyers, and sending email notifications one to two weeks in advance of public meetings. It will also provide input on the public engagement strategy, and help determine the format for future public meetings. Members of the subcommittee include:

- Scott McDonald
- Vinny McClelland
- Randy Douglas
- Bill Ferebee

⁵ Additional stakeholders are welcome and will be identified by the planning committee.



Strategy 2: Public Meeting

Objective: Public meetings will inform the public about the NYRCR planning process, present the preliminary results from the NYRCR plan and obtain input from residents, business owners and other stakeholders regarding a community vision, community needs and opportunities, and potential projects for implementation. Input will also be solicited on immediate needs, and emerging opportunities for economic development and suitable projects for implementation.

Strategy: A series of four public meetings will be held; each series will have one or more meetings as determined by the planning committee. The first public meetings will inform the public of the NYRCR planning process. The second meeting series will present preliminary findings. The third meeting series will obtain public input on identified programs, projects, actions and strategies. The final series will present the plan to the public. The meetings will use a variety of yet to be determined techniques to engage stakeholders and solicit input.

Venue: A public meeting will be held in both the Town of Jay and Town of Keene as part of the first public meeting series. Each meeting will be inclusive of both communities. The first Town of Keene Public meeting will be held at the Keene Fire Hall. The first Town of Jay public meeting will be held at the Au Sable Forks Community Center.

Notification:

- Announcement in local newspapers two weeks prior to scheduled meeting: Adirondack Daily Enterprise, Press Republican.
- Announcement on NYRCR Website.
- Announcement on public and partner websites (TBD).
- Emails to distribution lists available to committee members and partner organizations.
- Flyers posted in government buildings, libraries and other public bulletin boards.

Schedule & Format:

- 1st Public Meeting to inform public of planning process and solicit input into community vision, needs and opportunities, and preliminary identification of projects and strategies .
 - October 16th (Keene)
 - October 17st (Jay)
 - Meeting Format: The first public meetings will use an open house style format with interactive stations to solicit input from the public. The following stations will be used:
 - Station 1: Welcome- A table will include sign-in sheets, FAQ sheets, blank name tags and a slideshow of local photos.
 - Station 2: Program Overview- This station will include a description of the program, planning process, and project timeline. A poster will display the geographic study area, flood plains and watershed.
 - Station 3: Mark the Waterline – A map showing the floodplains and watershed will be available to allow stakeholders to draw where flooding occurred.
 - Station 4: Existing Community Plans and Projects- A poster will show a list of identified plans and community vision statement and allow attendees to write



additional sources, worksheets will allow attendees to provide input on project ideas.

- Station 5: Community Assets- A series of poster size maps will display four enlarged sections of the towns of Jay and Keene and will be overlaid with floodplain data. Attendees will be able to write and draw additional assets on the maps.
- Station 6: Needs and Opportunities- A poster will display preliminary list of needs and opportunities and allow stakeholders to “vote” for priorities using green dot stickers.
- 2nd Public Meeting – agenda and date to be confirmed.
 - TENTATIVE: November 13th – date and location to be confirmed
- 3rd Public Meeting to solicit input into programs, projects, actions and strategies.
 - January 2014 (Date and location TBD)
- 4th Public Meeting to present plan
 - Date and location TBD

Strategy 3: Community Story Campaign

Objective: This campaign provides a process to allow stakeholders who were affected by recent storms and flooding to share their stories and/or submit project ideas.

Strategy: Stakeholders will be able to submit their own printed stories at local drop-off sites, by mail and electronically through e-mail. Information will be included at the drop-off site detailing how stakeholder should label the photo if return of the photo is needed. A disclaimer will be included indicating that submitted photos may be published with no remuneration.

Notification:

- Announcements at NYRCR committee and public meetings.
- Announcements on public and partner websites (TBD).
- Emails to distribution lists available to committee members and partner organizations.
- Comment sheets available at meetings and drop-off venues.

Drop-off Sites: A drop box will be located at Keene Town Hall and Jay Town Hall.

Schedule: Beginning in October 2013; ending TBD.

Strategy 4: River Walkabout

Objective: To obtain input from committee members and other informed members of the community on where flooding has occurred outside of the flood plains.

Strategy: Scientists and Engineers will meet with members of the public to physically walk along sections of the Ausable River and photo document where flooding has taken place and use GPS



Notification:

- Community Lead will coordinate with Co-Chairs to setup walkabouts.

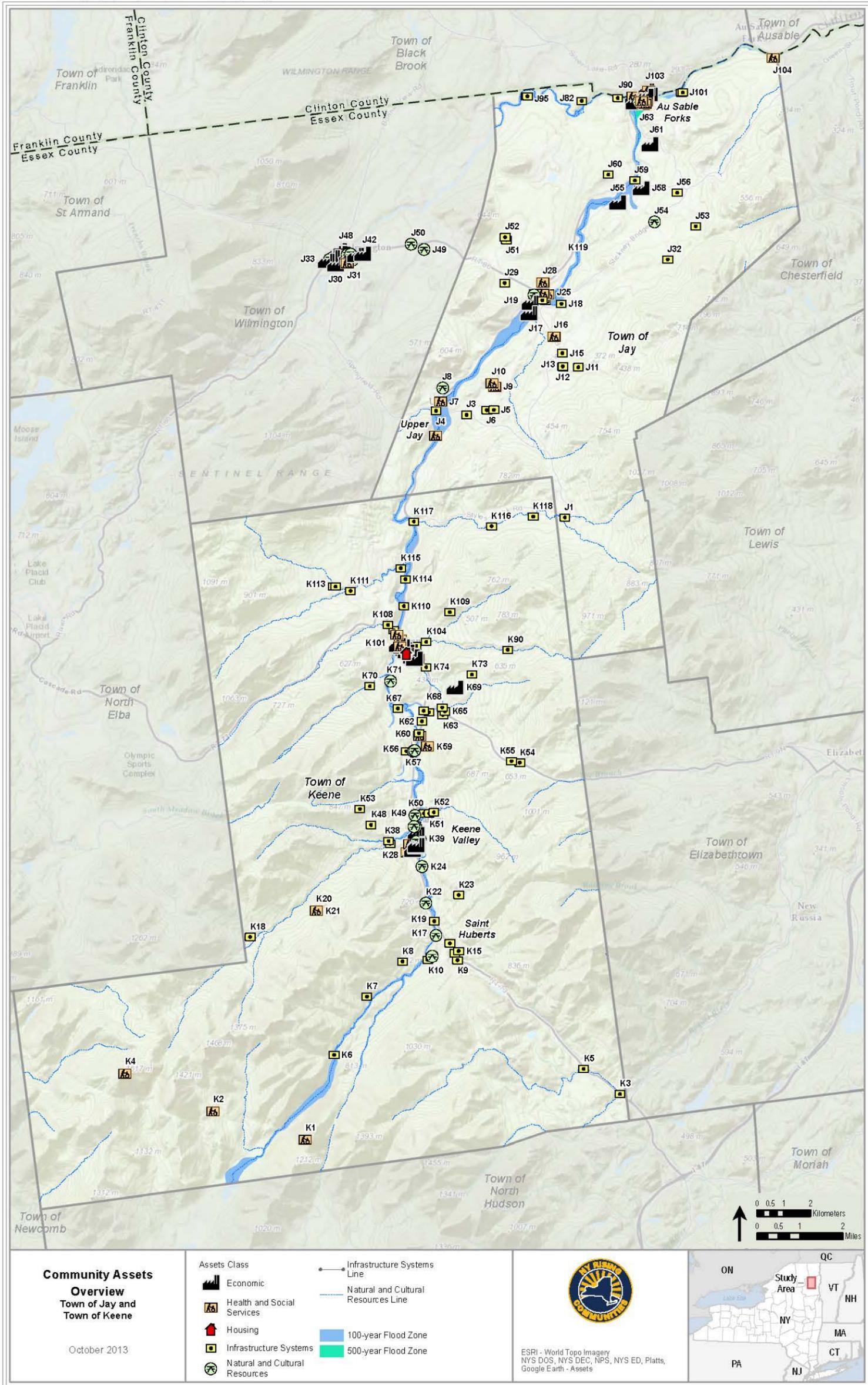
Schedule: October and November 2013.



Appendix B: Inventory Assets

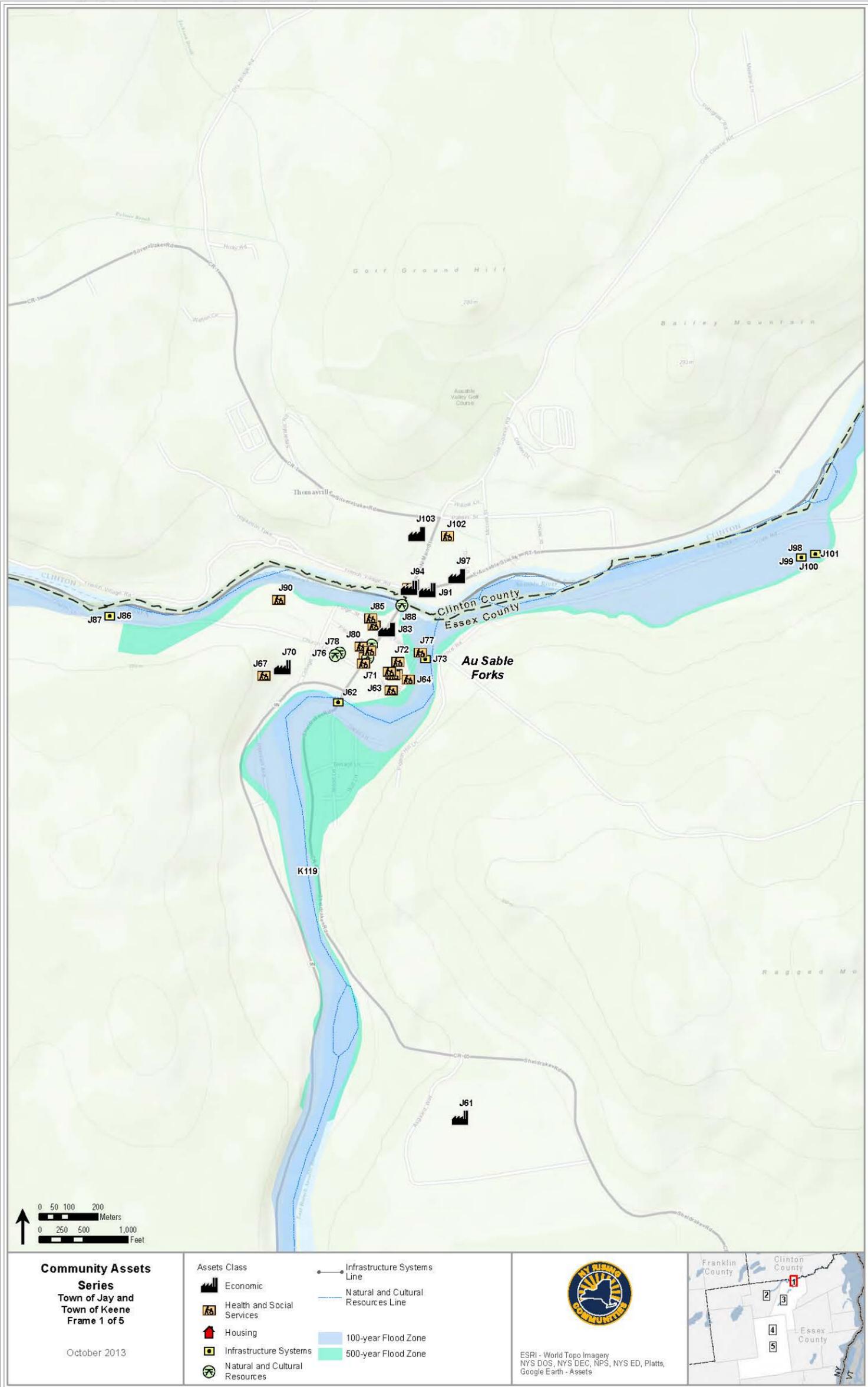


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Community Assets Series
Town of Jay and Town of Keene
Frame 1 of 5

October 2013

- | | |
|--------------------------------|-------------------------------------|
| Economic | Infrastructure Systems Line |
| Health and Social Services | Natural and Cultural Resources Line |
| Housing | 100-year Flood Zone |
| Infrastructure Systems | 500-year Flood Zone |
| Natural and Cultural Resources | |

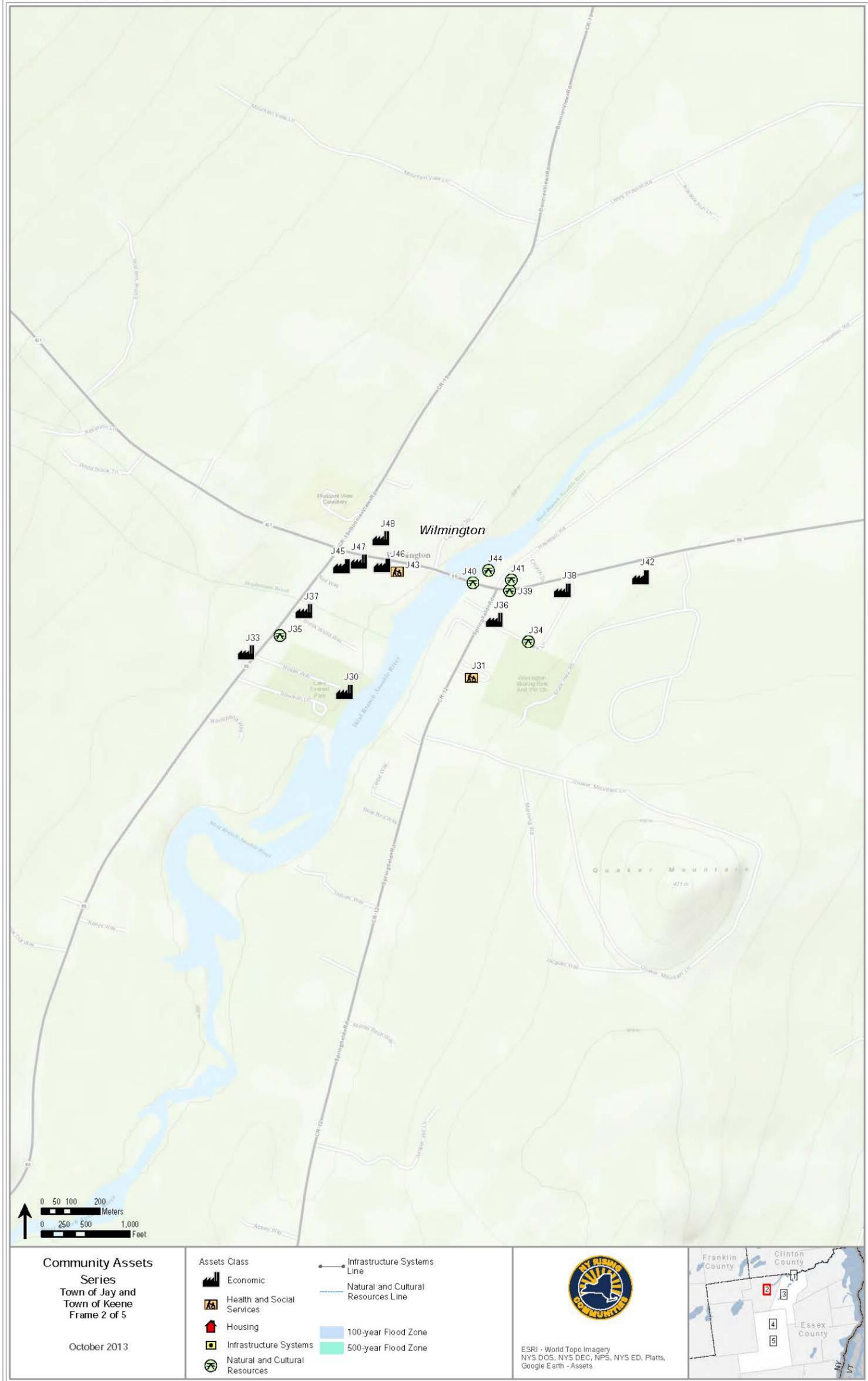


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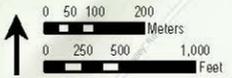
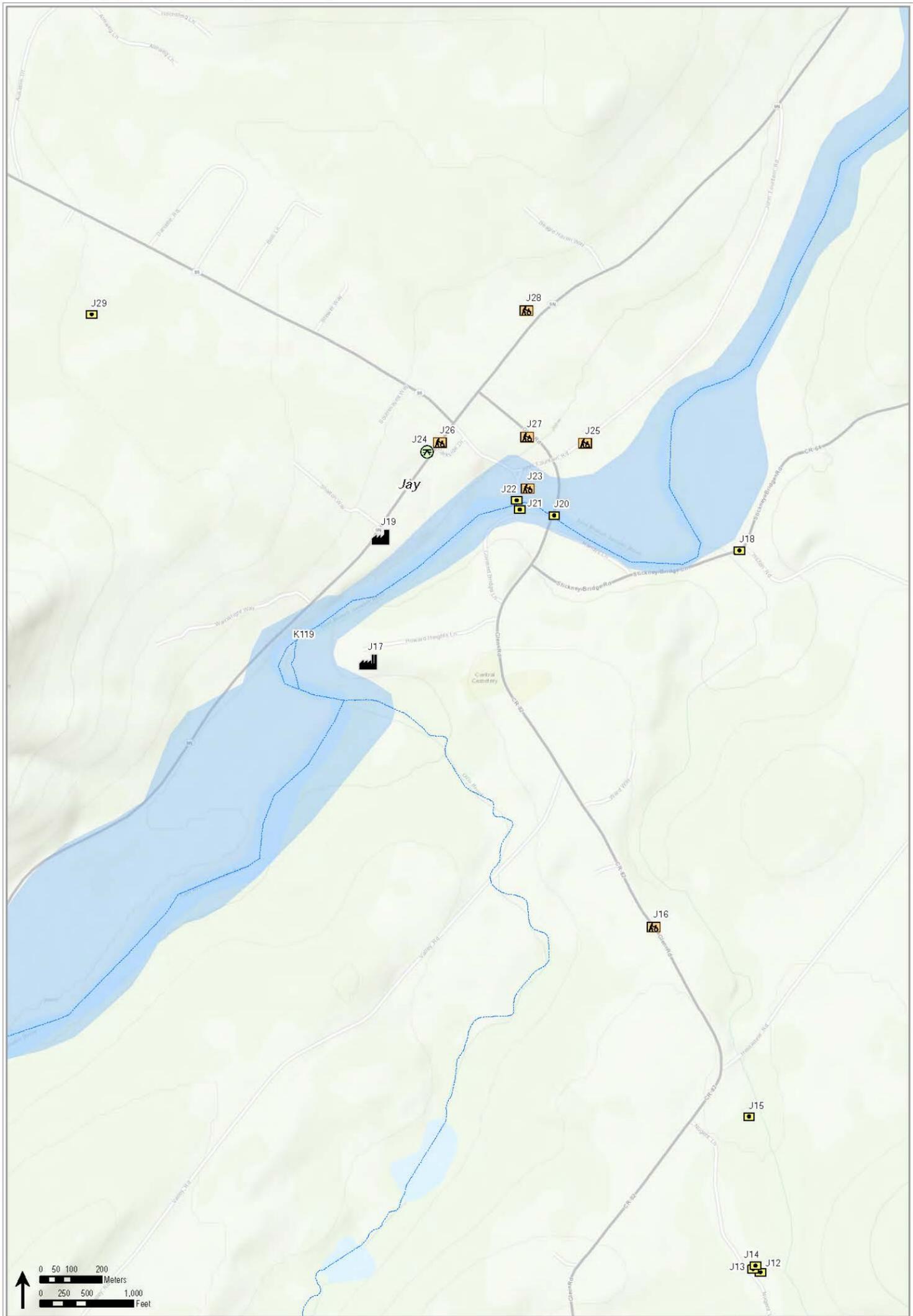


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Community Assets Series
 Town of Jay and Town of Keene
 Frame 3 of 5

October 2013

Assets Class

- Economic
- Health and Social Services
- Housing
- Infrastructure Systems
- Natural and Cultural Resources

- Infrastructure Systems Line
- Natural and Cultural Resources Line
- 100-year Flood Zone
- 500-year Flood Zone

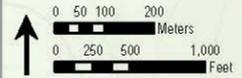
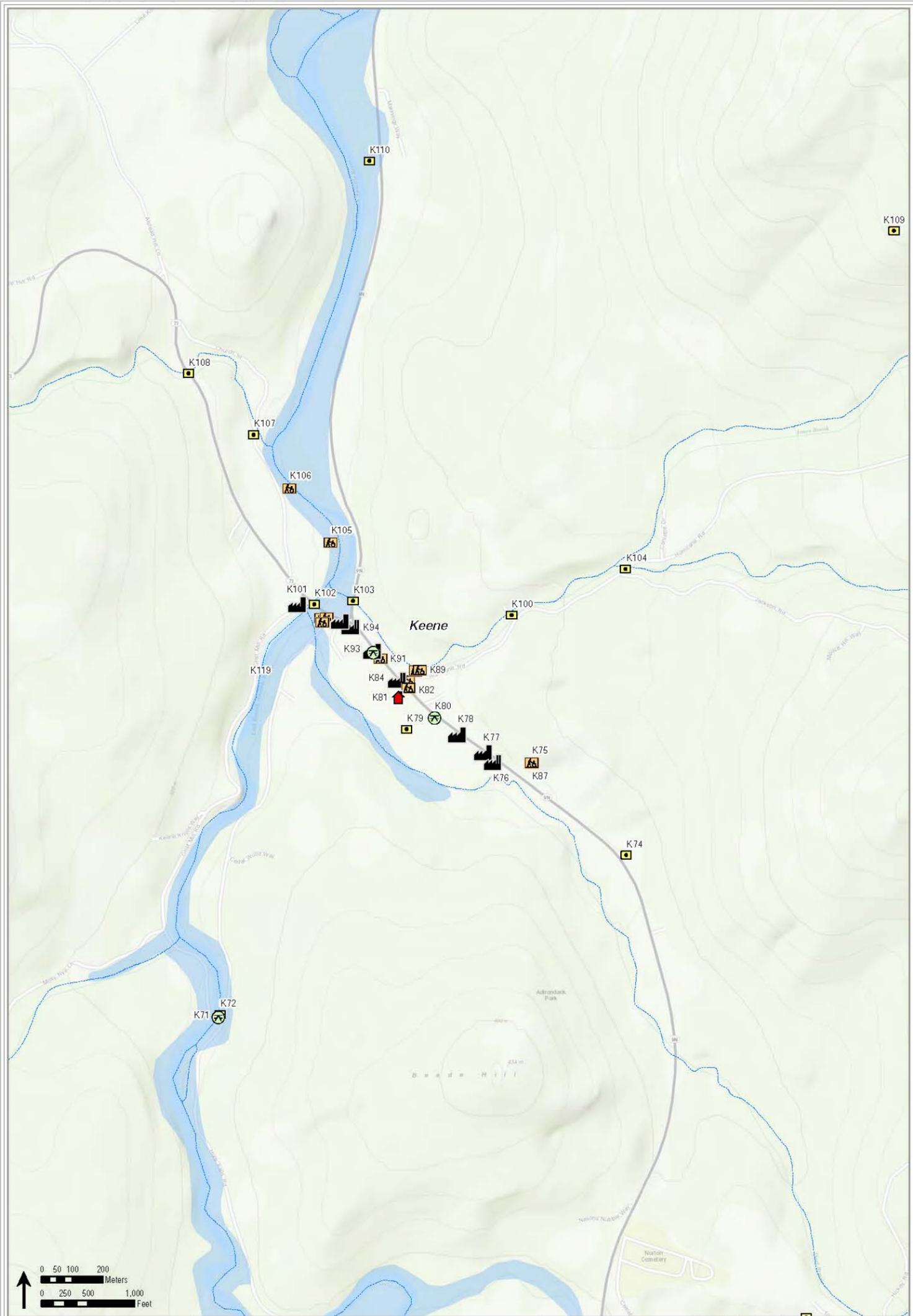


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Community Assets Series
 Town of Jay and Town of Keene
 Frame 4 of 5

October 2013

Assets Class		Infrastructure Systems Line
Economic	Health and Social Services	Natural and Cultural Resources Line
Housing	Infrastructure Systems	100-year Flood Zone
Natural and Cultural Resources		500-year Flood Zone

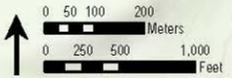
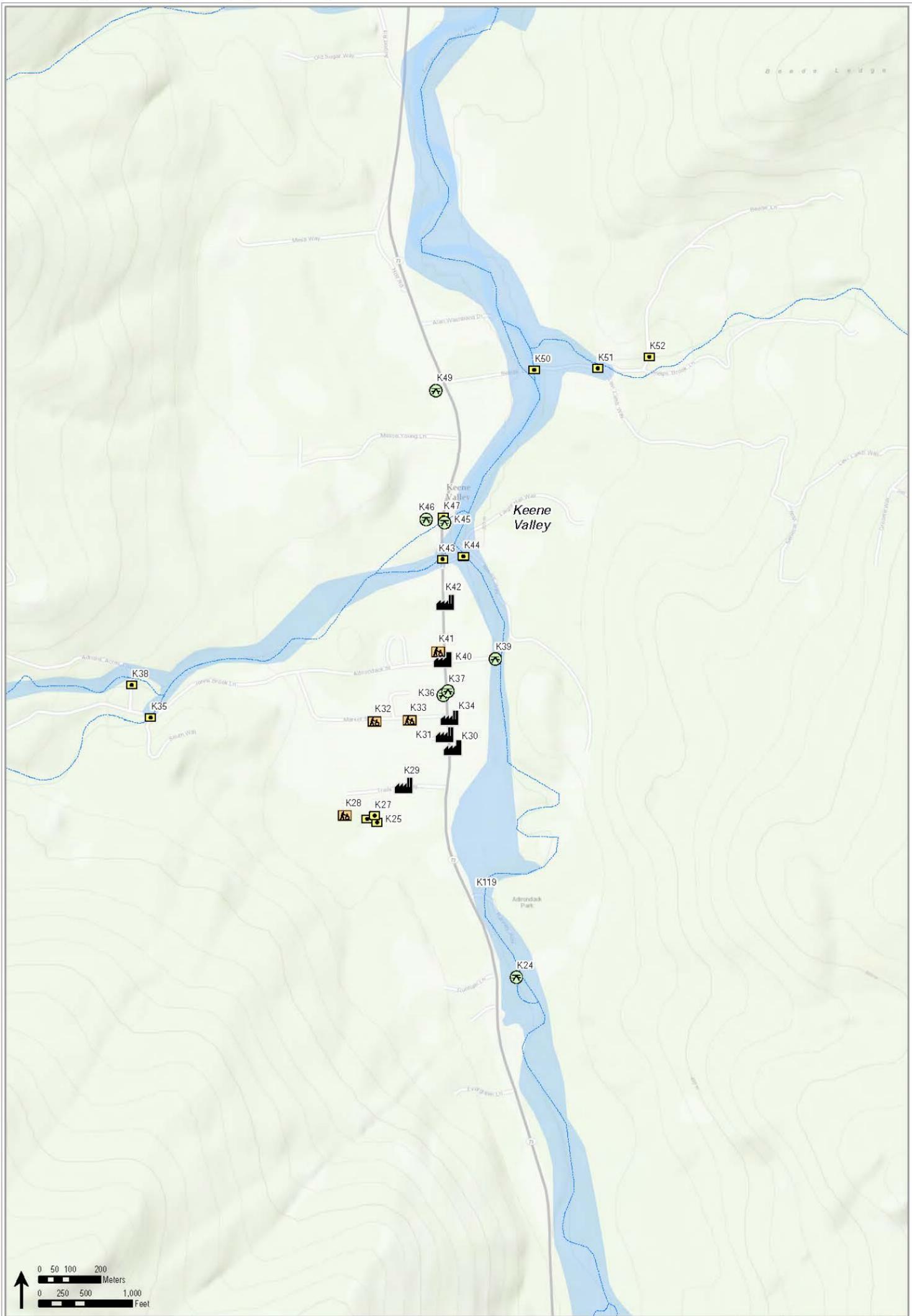


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Community Assets Series
Town of Jay and Town of Keene
Frame 5 of 5

October 2013

Assets Class

- Economic
- Health and Social Services
- Housing
- Infrastructure Systems
- Natural and Cultural Resources

- Infrastructure Systems Line
- Natural and Cultural Resources Line
- 100-year Flood Zone
- 500-year Flood Zone



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Google Earth - Assets

