

# **Institutional Analysis: Rhinebeck Environmental Policy**

Accepted by the Joint Environmental Committee – May, 2018

## **Introduction**

In 2017, the Town and Village of Rhinebeck, New York formed a joint Environmental Committee to address climate change by supporting and informing the development of future environmental policy at the local scale. The formation of this committee reflects the desire to collaboratively address environmental and climate issues and to unite issue silos that have been sporadically and separately addressed in the past in order to move forward with a more integrated vision of environmental policy and action. The silos identified and addressed by the Environmental Committee are water, waste, transportation, renewable energy, and policy.

The Joint Environmental Committee will orient Town and Village policy formation to position Rhinebeck as a leading local actor in addressing mounting issues stemming from climate change. Current goals of Town and Village Boards prioritize conserving the environmental integrity of the watershed and the rural character of the landscape, and to carry forward Dutchess County environmental conservation objectives. The Environmental Committee will provide additional guidance to Town and Village Boards on how to address current priorities while working within the larger context of the state-level Reforming the Energy Vision (REV) initiative. REV promotes renewable energy development and energy efficient in public buildings within New York State, and represents a potential source of funding for local actions pursuant to clean energy standards.

As a first step toward achieving the goal of a unified platform for climate action, the Environmental Committee requested a baseline institutional analysis of the actions taken by the Town and Village of Rhinebeck toward environmental conservation. This document summarizes the work of each entity over time, from 2004 to the present, as well as pertinent background information dating back to the 1990s. It also provides background on relevant community objections to actions, so that negative outcomes can be better predicted and avoided in the future. The information contained in this document was compiled through a series of interviews with Rhinebeck current and former members of Town and Villages boards, committees, and local organizations active in policy and environmental projects during the focal time period, as well as through review of Town and Village project documents, legal codes, and local newspapers. In addition to compiling and briefly assessing the Town and Village policies on paper, this work elicits lessons learned from the people who participated in order to summarize challenges and opportunities to environmental policy action in Rhinebeck.

# **Town of Rhinebeck Environmental Policies and Actions**

## **Background**

Rhinebeck is a town of just over 7,500 residents in Dutchess County, New York. The Town covers 39.7 square miles, approximately 10% of which is water. There are currently no Critical Environmental Areas in the Town of Rhinebeck, but the Town contains several important habitats worthy of such designation in the future, including Crystal Lake, the Landsman Kill, a section of Hudson River waterfront, Ferncliff Forest, and a range of smaller wetland, creek, and forested areas. Hudsonia has documented the state-endangered Blanding's Turtle along White Schoolhouse Road and habitat surveys indicate several more areas that are potentially usable by the species.

As a Class 2 Town, Rhinebeck is governed by a four-person Town Board, each member elected to a four-year term, and overseen by a Supervisor, elected to a two-year term. A number of boards and committees serve under the Town Board, including the Planning Board, Zoning Board of Appeals, Conservation Advisory Board, Recreation Committee, Cemetery Committee, Open Space Affordable Housing Committee, and the Historic Structures Committee. The Town Board has long been concerned with historical preservation—the Town contains 437 National Historic Register sites—and with conservation of the Hudson River. The Town's 2009 Comprehensive Plan sets forward a vision for preserving rural character and open space, as well as a set of goals for future resource management. Historically, the Town has managed its waste, water, transportation, and energy in the following ways.

The Town landfill, consisting of 8.5 acres on Stone Church Road, was closed in 1997, when the state required municipal landfills to be capped and solid waste management handled at the county level. This decision was made due in part to a desire to make recycling easier, but capping the landfill and opening the privately-managed transfer station presented new challenges for the Town. The landfill was capped to 1993 DEC specifications, which included layers of impermeable material with vents for methane gas, a membrane, a foot of topsoil, and grass planting. The Town was then tasked with monitoring potential chemical leaching into nearby wells. After an issue with potential well contamination in 2012, the Board of Health took over monitoring. Shortly after capping, the DEC told Town officials that if they found “so much as a gum wrapper” at the site, the Town would be censured for reopening and dumping in the landfill. To date, any development at the former landfill site must be handled carefully so as not to disturb the buried hazardous material.

Many Town residences are on septic systems, including all of the Rhinecliff hamlet. This represents a potential issue for waste disposal because there is not room for appropriate drainage fields within Rhinecliff lots. Septic systems are generally less expensive to maintain, and the cost burden is borne by the homeowner rather than the municipality. However, the growing population and the Town's desire to be certain that wastewater is appropriately treated may be better served by a septic system.

Water management within the Town is primarily focused on preserving the Hudson River and its shoreline, ensuring that the area is intact and accessible. To meet these goals, the Town established a Local Waterfront Revitalization Program (LWRP), designating an area of special significance within 1,000 meters of the Hudson River in which proposed developments are held to high environmental standards and subject to additional review. Flooding is addressed through requirements that extensive project proposals include Stormwater Pollution Prevention Plan documents, and developments within areas of high risk apply for floodplain development permits.

There has not been a strong emphasis on installing permeable pavement, rain gardens, or other green infrastructure for stormwater management. Additionally, the Town Highway Department is located along a stream on West Market Street. The stream buffer is minimal and could be improved through planting to protect the stream from road salt that is stored onsite. Overall, however, the Town supports water infiltration by preserving open space and promoting tree maintenance and wetland conservation

The hamlet of Rhinecliff supports an Amtrak station with a broad radius of service, including trains to New York City, Chicago. There is no major form of public transportation in the Town of Rhinebeck. In the late 1990s, the Duck bus offered service between Dutchess and Ulster Counties, but it was considered extremely unreliable and did not have broad community support. There was also a barge-style ferry service from Ulster to the Rhinebeck Landing in the late 1990s and early 2000s. Service was largely dependent on weather conditions and ridership was low. Historically, a ferry service operated between Kingston and Rhinecliff from 1790 until 1956, when the Kingston-Rhinecliff Bridge was installed. Incentive to build the bridge was based on complaints that ferry service was unreliable or unavailable during WWII.

There are no designated bike lanes in the Town, although there is signage to make drivers aware of cyclists on certain roads. The State is required to sign off on installation of bike lanes on State Highways, which represents an additional hurdle for this form of transportation. Bike paths are a key element of the Comprehensive Plan, where they fulfill the dual purpose of increasing connectivity and providing recreational activity.

The Town is working to achieve NYSERDA Clean Energy Communities certification. If Rhinebeck completes four of the ten designated actions, grants are available that provide \$5,000 of general municipal funding. Actions that are underway include: (1) Inventorying greenhouse gas emissions, (2) converting streetlights to LED, (3) installing an EV charging station, and (4) adopting the Unified Solar Permit (the Town already uses an older version of the permit, but a new version is recommended, allowing for larger installations up to 25 kW). The Town participated in Solarize, which would count as a fifth action if 10 customers resulted (actual number of customers is unclear given Solarize records, but this can be checked). The Building Inspector can also attend NYSERDA Clean Energy training to complete a sixth action. Benchmarking is a key first step; the program requires tracking energy use by municipal buildings and publishing this data online using the EPA Portfolio Manager tool. Offsetting or reducing this energy use by 10% counts as a separate action. Another high-impact action option is Community Choice Aggregation, allowing the community to choose an energy provider and

aggregating buying power to make it more affordable to purchase renewable energy. This will green the Town's energy portfolio and can save citizens money over buying directly from an investor-owned utility.

### **Environmentally-Relevant Town Code Policies**

#### *Waste*

95: Sets standards for solid waste disposal. Tires, batteries, household appliances, yard waste, scrap metal, junk cars, furniture and other large items, construction waste, hazardous chemicals, and motor oil must be separated from other solid waste and disposed of according to County regulations. The Town has the sole authority to sell bags for disposal of all other solid waste.

#### *Water*

73: Sets standards for flood damage prevention and special construction standards within an area of special flood risk

118-4: Establishes the Conservation Advisory Board (CAB) to advise Town agencies on Local Waterfront Revitalization Program (LWRP) implementation and consistency.

120-2: Sets comprehensive standards for the protection and conservation of freshwater wetlands.

120-4: States that the Town has adopted Greenway Connections and requires that agencies incorporate Greenway Compact Program provisions in proposal review.

120-5: States that the Town has adopted the Local Waterfront Revitalization Program (LWRP), establishes the Local Waterfront Revitalization Area (LWRA) of special significance, and creates a Waterfront Advisory Committee (WAC). When significant actions are proposed within the LWRA, reviewing agencies are required to seek a written advisory report from the WAC. Prohibits polluting activities and vegetation removal within regulated areas.

120-10: Sets standards for wetland use permits.

125-3: States that the purpose of the Zoning Law is to "protect and manage the rural, scenic, natural and historic character of the Town," to "protect the character of specifically identified scenic and historic resources and sensitive environmental areas, including wetlands, floodplains and other water bodies, prime agricultural soils, and steeply sloped areas," and to "preserve and protect the Hudson River and its shorelands, and provide and protect visual and physical access to them."

- 125-15: Establishes zoning districts, all of which contain important stipulations regarding allowed use types, structural density, and historic and/or environmental conservation. Important districts and overlays include: Historic Preservation 20 (HP20), Land Conservation (LC), Land Conservation – Streams (LC-S), Land Conservation – Trails (LC-T), Flood Fringe Overlay (FF-O), Mining Overlay (Mi-O), and Water Resources Protection Overlay (WR-O).
- 125-33: Requires special setbacks along scenic roads and in scenic areas of at least 10% of parcel depth and requires that the CAB issue an advisory opinion on the proposed setback.
- 125-40: Requires special use permits and sets review standards for development near water bodies, including wetlands, rivers, and streams.
- 125-54: Sets standards for development within the WR-O and requires permits for a wide range of potentially damaging activities within regulated stream corridor.
- 125-55: Sets design standards for preserving scenic features including native vegetation and individual healthy trees within open fields.
- 125-59: Outlines habitat preservation goals, requiring that development proposals maintain habitat quality, diversity, and connectivity to the greatest extent practicable.
- 125-60: Sets minimum standards for stormwater management to control soil erosion and sediment accumulation in surface waters. Requires an adequate Stormwater Pollution Prevention Plan prior to approval of development proposals.
- 125-62: Requires that new construction be sited to minimize impact on streams, ponds, wetlands, steeply sloped areas, woodlands, and other sensitive environments.

### *Transportation*

- 96: Sets standards for blocking of streets; a permit must be acquired prior to blocking a street and the area must be cleaned after the event. Although the statute is directed toward both streets and sidewalks, the latter is not specifically addressed.
- 113: Standards for vehicles and traffic were under review at the time the Town Code was most recently published.

### *Energy*

- 125-47: States that it is Town policy to promote solar and wind power development, and sets standards for energy systems, including property line setback requirements and submission of viewshed impact reports for systems in scenic areas.
- 125-56: Sets standards for outdoor lighting, to preserve historic Town character and to reduce light pollution

## **Timeline of Key Projects and Policies**

### **2004**

L.L. 1-2004: Adoption of Greenway Compact Program and Guides for Dutchess County Communities. This voluntary program provides community planning support and makes the Town eligible for state grants. Since adoption, Greenway Grants have funded riverfront development projects including the pedestrian overpass to the Rhinecliff dock and river access at the Wilderstein Historic Site. There is still much more potential funding from State grants that the Town has not taken full advantage of due to limited resources for grant writing.

### **2005**

L.L. 2-2005: LWRP adopted. This sets policies regarding historic value, scenic viewshed, habitat and water resource management and preservation within LWRA. Property owners within the LWRA must comply with 44 LWRP policies, which focus on environmental conservation and historic/rural viewshed preservation. The CAB/WAC serves in an advisory capacity for property owners within the LWRA, recommending best management practices. The LWRP was also important in preventing Metro North from extending its line into Rhinebeck.

L.L. 3-2005, L.L. 6-2005, L.L. 8-2005: Building moratorium adopted and extended. This was intended to stop major developments while the Town Board made changes to the Zoning Law. Recommended changes included the creation of a new historic district and the removal of a planned residential development district. The moratorium allowed for variances.

### **2006**

L.L. 3-2006: Building moratorium extended

### **2007**

L.L. 2-2007: Waterfront Consistency Review Law adopted. Pursuant to the LWRP, this statute requires that proposed actions within the LWRA cannot proceed before property owners submit a form and receive certification that the action is consistency with LWRP policies.

L.L. 6-2007: Building moratorium extended

### **2008**

L.L. 2-2008, L.L. 3-2008: Building moratorium extended twice

## **2009**

L.L. 4-2009, L.L. 5-2009: Building moratorium extended twice

L.L. 6-2009: Zoning Law adopted, including §125-61 requiring that new construction meets LEED Green Building standards. The LEED standard posed a hardship to local developers and was delayed and later repealed through a series of follow-up laws.

L.L. 7-2009: Wetlands Law adopted. This regulates activities that adversely impact freshwater wetlands within the Town, including dredging, filling, polluting, or extensively altering. The goal of the law is to prevent property damage (i.e. flooding) due to wetland degradation, allow for continued recreational use of wetlands, and to promote overall watershed health and integrity. Property owners wishing to develop within wetlands or their associated buffer areas are required to first obtain a Town wetland permit.

## **2010**

Rhinebeck took the Climate-Smart Communities Pledge and the Town Board authorized a task force to quantify the Town's greenhouse gas emissions and identify strategies for reducing emissions and adapting to climate change. This allows the Town preferential scoring when applying for Climate-Smart Communities Grants. A Task Force was designated at the time of the pledge adoption, but it is no longer active. A new Climate-Smart Community Task Force must be established in order to restore momentum.

Hudsonia provided a full Environmental Impact Assessment for a proposed CSI Developers commercial project on Rt. 9G (Requested by Planning Board.)

Work began on Green Burial Ground in the Rhinebeck Cemetery. The Town took over the cemetery in 2002, after the nonprofit cemetery was unable to fund operations. Community interest led to the formation of a Green Burial Committee. Hudsonia and DEC biological assessment reports were provided to the Committee at no cost to the town and used to create a management plan for the 8-10 acres of woods on the grounds. These reports included a list of recommended species for future planting.

## **2011**

L.L. 2-2010: The Conservation Advisory Council was formalized into a Conservation Advisory Board, with greater administrative authority. The Planning Board supported this action because they had generally liked the work that the CAC was doing in terms of site review and were supportive of environmental measures. Status as a Board is more restrictive in terms of rules in some ways: members must live in the Town and meetings must be open. Law requires that the CAB be involved in project reviews and submit Waterfront Consistency Reviews, and these reports must be considered in Planning Board decisions. There was some controversy surrounding potential overstep of CAB authority in the time immediately following the passage

of this law, and members recall that the Town Board threatened to retract the CAB's new status. This was largely due to personality clashes with certain CAB members, who then stepped down from the Board. Several current CAB members are aware of this conflict and remain concerned about causing further issues in the future.

## **2012**

L.L. 2-2012: Flood Damage Prevention Law adopted. The purpose of this law is to prevent excessive property damage due to flooding through the regulation of activities that excessively alter floodplains, stream channels, and existing natural flood barriers. Proposed actions within the area of high flood risk require a Town floodplain development permit to ensure compliance to construction standards.

## **2013**

L.L. 1-2013: Six-month moratorium on implementation of §125-61 of Town Code relating to LEED Green Building Standards

Hudsonia provided wetland impact consulting and proposed mitigation strategies for developments of a Hudson Valley Federal Credit Union location on Rt. 9 (requested by PB)

Hudsonia consulted on a forestry plan for Enterprise Farm (requested by CAB)

Hudsonia consulted on a forestry plan for Neighbors Gun Club (requested by CAB). Logging plan and logging trail placement to preserve wetlands and good-condition trees.

## **2014**

L.L. 1-2014: §125-61 Building moratorium extended

Hudsonia submitted a report on a CAB-proposed Critical Environmental Area. The area contains high-quality habitats including extensive unfragmented forest; at least five large meadows; many wetlands of varying size; at least 32 intermittent wetland pools; large areas of crest, ledge, and talus habitat; a small oak-heath barren; and forest regions of Landsman Kill and Crum Elbow Creek, along with forested tributaries. The area also supports four NYS Species of Special Concern and one NYS Threatened Species. The CEA has not been formally adopted, probably because no citizen has been able to devote the amount of time required to complete the application.

The Green Burial Ground in Rhinebeck Cemetery officially opened. Funding comes from Friends of Rhinebeck Cemetery (a local 501C-3 organization) as well as the Rotary and Interact Clubs. Plots are more expensive than comparable plots in the conventional burial ground, but interest is high, both from within and from outside the community. In pre-need sales, green plots

are outselling conventional. Income from funeral plot sales has been used to clear out snags and debris and to plant over 150 trees.

## 2015

L.L. 3-2015: §125-61 Building moratorium extended

L.L. 4-2015: White Schoolhouse Road Mining Overlay Correction. Town Code amended to clarify the boundaries of Mining Overlay Zoning District (Mi-O). 308 to Slate Quarry Road, Red Wing Mining Co. wanted to extract gravel on their entire property. The Zoning Code was clarified to restrict extraction to existing DEC-permitted mines (with an exception for farmers in Agricultural District 20 [AG20], allowing them to move soil within areas that are under active cultivation). Red Wing sued the Town, and the Town's decision was upheld at the state level. While Red Wing had done some things to increase their mining area, it wasn't enough to support that the areas were under active extraction.

## 2016

L.L. 1-2016: Repealed §125-61 of Town Code. This section, which required new construction to meet LEED Green Building Standards, was enacted with no study of appropriateness for the town. Local builders were not capable of meeting the standards, especially a requirement that materials be sourced from within 25 miles of construction. The Town was advised that tax abatements for efficient buildings would be a more effective means of promoting green building practices, but this is not feasible due to tax caps in Town Budgets. Further, New York State amended the Commercial Energy Efficiency Code in 2014 and is amending the Residential Energy Efficiency Code. The resulting codes will be more efficient than what was called for under §125-61 at the time of its enactment, making this section unnecessary.

The Maritime Associate of the Port of NY/NJ, representing oil and shipping interests, proposed long-term oil barge docking along the Hudson, allowing for as many as 43 oil barges to be docked as far north as Rhinebeck. Governor Cuomo, along with many NGOs and town governments opposed this project. The proposal is in limbo as the Coast Guard studies potential outcomes and the NYSDEC determines areas to outlaw oil barge docking.

Community members participated in Solarize Northern Dutchess, an effort to encourage residential solar in the towns of Rhinebeck, Red Hook, Milan, Hyde Park, and Pleasant Valley, as well as the villages of Red Hook and Tivoli. During this initiative, Hudson Solar and Direct Energy Solar provided participants with a 10-20% discount on installation. Over 200 homeowners attended workshops in Northern Dutchess, resulting in 81 contracts and over 763.5 kW of installed solar capacity. Rhinebeck laws are solar-friendly: roof-mounted solar installations do not require a zoning variance, and ground-mounted panels only require a variance if they are in the front of a property or close to a property line.

## **2017**

L.L. 2-2017: Solar and Wind Farm law. Amended Town Code §125 to establish a Civic 2 (CIV2) District and to provide regulations for energy development in this district. The code restricts size and ecological impact (i.e. soil compaction) of developments. Controversy developed around a proposed solar installation pursuant to this law. Neighbors' complaints included potential noise, radioactivity, and increase in truck traffic. Three neighbors filed suit against the town, in which plaintiffs alleged that members of the task force writing the law had significant conflicts of interest.

## **2018**

The CAB is beginning an assessment project with Hudsonia, with the goal of assigning CEA status to Sepasco Lake, the largest lake in the Town. The homeowners surrounding Sepasco Lake were initially worried that this would limit their ability to develop on their properties, but additional discussions between the CAB and the Homeowners' Association has allayed these concerns. The Town Board will soon vote on assigning funding for this assessment.

New York State Supreme Court issued summary judgement in favor of the Town, ruling that the Solar and Wind Farm law was properly adopted. Renewable energy projects in the Town will move forward, though objections from neighbors will likely continue.

# **Village of Rhinebeck Environmental Policies and Actions**

## **Background**

The Village of Rhinebeck comprises 1.6 square miles and 2,657 residents. It lies entirely within the Town and is governed by a Mayor and a board of four trustees. Village services such as the volunteer fire department and the water treatment facilities serve a limited number of Town residents, but residents of the Town are not subject to Village codes or taxes. The Village Master Plan, adopted in April of 1993, laid out a detailed set of land-use policies, principles, and guidance to protect and promote the character, economy, and natural and cultural resources of the Village. The Village has historically managed its waste, water, transportation, and energy under the Master Plan in the following ways.

Village code prohibits littering, and public solar-compacting trash receptacles are available in several locations. Municipal garbage pickup is available to Village residents and solid waste is routed to the Rhinebeck Transfer Station. Hazardous waste can be delivered to a Dutchess County Household Hazardous Waste Disposal Day funded by the NYSDEC. The Wastewater Plant was opened in the 1980s to service the business district and some residential developments including the Woods and the Village Green. It is also used by Astor Gardens, Tops Grocery, Caremount Medical, and Northern Dutchess Hospital; these customers pay fees in addition to the standard charge. Master Plan Community Facilities Goal 6.8 directs policymakers continue exploring ways to coordinate public services including waste management in order to make these services more efficient and cost-effective.

The Village Master Plan includes goals designed to protect and promote water quality. Land Use Goal 3.2 in the Master Plan directs the Village to protect 100-year floodplains, wetland areas, slopes steeper than 15% grade, and prime agricultural soils. This is intended to protect environmental services including water cycling, water quality, and scenic value. Land Use Goal 3.3 instructs the Village to promote land use practices that minimize pollution and protect both surface waters and groundwater resources. Land Use Goal 3.4 directs that the Village utilize the SEQRA process to obtain and evaluate environmental impacts of all proposed developments and make projects and potential alternatives open to public comment.

Pursuant to these goals, a conservation easement has been established along the Rhinebeck Kill. The watershed was historically heavily polluted by mills, and this easement is helping to restore watershed quality. Community Facilities Goal 6.7 within the Village Master Plan indicates that the Village should work cooperatively with the Town and the Dutchess County Health Department in long-term ecological monitoring efforts by collecting data on septic system failures and other pollutants in streams, wells, and Crystal Lake. As noted previously, the Board of Health has been monitoring well contamination around the former Town landfill since 2012.

The Village also promotes water quality and infiltration through the maintenance of an urban tree canopy. This priority was outlined under Land Use Goals 3.6 and 3.7 in the Village Master Plan. Goal 3.6 states that the Village should maintain existing street trees and replace trees that die or

are removed, with a target of 20 new trees of varying species planted each year. Goal 3.7 directs the Village to work with the Town to support and reinforce the Village's role as the community center of Rhinebeck, including planting tree rows at Village entranceways and preserve open space buffers to define Village boundaries.

The Village Tree Commission has worked to plant hundreds of trees and remove dead and dying trees. There are occasional conflicts between the Sidewalk Committee and the Tree Commission. In these cases, sidewalks are generally preferred because their presence is an issue of immediate human safety, while trees can be replaced. Sidewalks are at risk of being damaged by trees that were planted inappropriately (i.e. the wrong species were selected and planted without the use of structural soil, leading to sidewalk buckling). In the past, the Village shared the cost of tree removal and sidewalk repair, but a previous conservative administration shifted this cost entirely to the property owners. This can lead to damaged or damaging trees being left in place for too long, since property owners are not willing or able to pay. The Tree Commission has also developed a book of appropriate tree species and worked to promote biodiversity in plantings. At times, Village officials or citizens have preferred the aesthetic of monoculture plantings, but diversity makes the plant community more resilient and animal-friendly.

The Highway Department is positioned along the Landsman Kill. The Highway Department collects and mulches wood and brush from along roadways onsite. There has been some planting to enhance the stream buffer, but there is still room for improvement to prevent solids from being washed into the stream.

Village transportation policy is focused on reducing the need for cars by promoting pedestrian travel and mass transit. Master Plan Transportation Goal 7.9 addresses the importance of promoting affordable commuter rail service at the Rhinecliff Station and reliable bus travel, though there is still room for improvement in bus service. The Village promotes an environmentally-friendly lifestyle by encouraging residents to live close to the Village center, making it possible to walk between home and important Village spaces such as the school, Village center, and library. Keeping the Village compact and connected not only reduces the need for car travel in daily life, but also slows rate of suburban sprawl and preserves farmland.

Within the Master Plan, Transportation Goal 7.10 is focused on promoting pedestrian friendliness within the Village by creating a program to maintain and extend the sidewalk system. Pursuant to this goal, the Village Sidewalk Committee was founded to improve connectivity. Every time a new business or service opens, the Village goal is to add sidewalk to create an interconnected and walkable community. Recently, the group has extended sidewalk to the hospital, though there was some objection to the construction of sidewalk beyond the hospital due to the removal of trees for its placement. Transportation Goal 7.10 also directs the Village to create a system of bicycle paths and walking trails to connect the Village Center with surrounding developments and with a Town trail system. Though there have been considerable improvements to make the Village more walkable, there are still no designated bike lanes or bike racks in the Village.

Energy use is monitored for Village Buildings and there three arrays of solar panels on the roof of Village Hall, installed in 2011. Electric vehicle charging stations are being added in the two locations: a Tesla-only station near Smoky Rock BBQ and a rapid-charge station that is proposed for placement in the police station parking lot. These energy projects are important both for reducing the Town and Village carbon footprints and, more immediately, as steps toward Climate-Smart Community designation.

### **Environmentally-Relevant Zoning Code Policies**

#### *Waste*

120-39: Sets standards for construction within the Historic District Overlay and requires demolition permits. Prohibits environmentally unsound building materials and recommends natural materials such as wood and stone.

#### *Water*

120-16: Sets minimum and maximum numbers of off-street parking spaces for all land uses. This reduces the need for street and municipal parking, but has the potential to impact the amount of impermeable surface within a lot.

120-40: Establishes the Land Conservation Overlay to protect Landsman Kill, Crystal Lake, and key wetlands. Requires maintenance of buffer zones (a minimum of 40 feet). Proposals for development within this area are subject to close review to ensure that disturbance is minimized, and site plan review is required by the Planning Board (120-45).

120-41-45: Establishes the Special Sensitivity Overlay, primarily for historic preservation purposes. This requires that projects protect or enhance residential characteristics and allowing for low-intensity commercial use. Businesses are prohibited from emitting a variety of pollutants (particulates, noise, light, etc.) and site plan approval by the Planning Board is required prior to building permit issuance.

120-47-48: Requires SEQRA compliance in permit applications, and submission of EAF or Draft Environmental Impact Statement as determined by Planning Board.

#### *Energy*

120-18: Sets maximum brightness levels for lighting, prohibiting lights that shine above the horizontal plane, and requires that businesses extinguish lights after business hours

## **Timeline of Key Projects and Policies**

### **1993**

The Village adopts a 25-year Master Plan. In addition to the goals outlined above, the Plan makes recommendations relating to environmental protection, maintaining open space, delineating buffers and boundaries, creating a central green space, and establishing a multiuse trail system in partnership with the Town. It also identified several spaces to acquire potential parkland.

### **2009**

Tree Ordinance (§106) establishes a five-member Tree Commission to inventory Village trees, create a long-term management plan, and make recommendations for the protection of trees in development projects. Permits are required for altering or removing trees within the right-of-way (with exceptions for dead or otherwise unsafe trees). The law describes penalties for residents acting without permits, but these penalties have rarely been enforced.

Since its inception, the Tree Commission has sponsored a Spring and Fall planting, and to date over 300 trees along streets and in Village parks.

### **2010**

The Tree Commission compiled a tree inventory of all streets on digital disc. The inventory included location, species, trunk diameter, height, and condition of trunk and canopy for each tree. This established a baseline for local tree diversity and highlighted the need for increasing diversity to protect the Village from a major loss of trees in the event of disease or pest outbreaks. In the time since this initial inventory, many of the trees have been removed and many more have been planted. This inventory should be updated and put online or into tree inventory software.

### **2011**

A grant from Trees for Tribes funded the planting of trees and shrubs along the banks of the Landsman's Kill and Crystal Lake. Most of these plantings have survived, and some have grown quite large.

Another grant funded planting a row of Sugar Maples along Mill Road at Grasmere Cemetery, as well as trees along Route 9 and in the Village center.

Rhinebeck named a Tree City USA community by the Arbor Day Foundation. This status had been conferred each year since.

## **2013**

Upgrades completed at the Waste Water Plant, replacing a dewatering sludge press (installed circa 1993) with a volute dewatering press. This upgrade led to a more energy-efficient process that eliminated the need for lime and ferric chloride in processing and resulting in an estimated annual cost savings of \$24,000. Estimated cost of the project was \$500,000. Despite this upgrade to the processing facility, the associated infrastructure is aging. There have been proposals to upgrade the water pipes, but little progress has been made in this area.

Big Belly solar compactors were installed in the Village parking lot and several other locations. These units separate recycling and garbage into different waste streams.

## **2016**

Central Hudson, working with the Tree Commission, proposed to remove approximately 100 trees throughout the Village at a cost of \$60 per tree. The standard price for removal is roughly \$1,200. The selected trees were damaged by years of pruning by Central Hudson during routine power line maintenance, and many were inappropriate species or inappropriately sited to begin with. The number of trees to be removed was alarming to Village citizens, and a small but vocal group developed to fight the proposal. This was an election year, and the Village Board was swayed by the protest. To date, the majority of the trees are still standing.

## **2017**

Beyond the Right-of-Way (BROW) amendment to the Tree Ordinance is passed, allowing for tree planting in new areas of properties.

Mayor Bassett, with the unanimous support of the Village Board, proposed an easement to allow Dandelion Energy to install ground loops within the Right-of-Way. This will make it easier for property owners to make the shift from heating oil to geothermal heating and cooling.

## **Town and Village Joint Actions**

In 2017, the Town and Village formed a joint Environmental Committee to inform policy decisions and improve local action on climate change adaptation and mitigation.

Town Supervisor Spinzia and Village Mayor Bassett have joined with representatives from town and city of Poughkeepsie, the town of Esopus, the town of Lloyd, and the town of Hyde Park to lobby for protecting water quality. These municipalities rely on the Hudson for drinking water. Riverkeeper is helping to organize meetings and develop a rubric for water monitoring.

## **Conclusion**

This document provides the first comprehensive summary of environmental policies and projects undertaken by the Town and Village of Rhinebeck from 2004 to the present. This baseline assessment of actions is meant to provide context for future policymaking and advising by the Joint Environmental Committee.

Based on this analysis, the Town and Village have taken significant steps in protecting the integrity of the watershed and promoting energy efficiency within public buildings. More recently, Rhinebeck has moved to make the policy environment friendlier to the development of renewable energy, especially in the form of solar installations. The actions compiled in this summary represent a history of environmental consciousness and a willingness to write and enact policies that favor environmental conservation.

Interview participants suggested that the Town and Village could improve environmental action by more aggressively pursuing grant funding from state agencies and nonprofit organizations. Additional funding would make additional environmental conservation projects possible and facilitate the Committee in achieving its goals of addressing climate change and the associated issues of sea level rise, energy efficiency, and the carbon footprint of the Town and Village. Stormwater regulations and flood prevention infrastructure could also be improved through policies to reduce the amount of impermeable surface within the Village. Installation of raingardens would catch flooding and create additional green space. However, siting is complicated due to the compact size of lots within the Village.

Recently, the former landfill has been considered as a site for affordable housing (though this was not pursued because chemical contamination makes the land unsuitable), cell tower development, and community solar. Ulster is currently installing community solar in their former landfill, and this can serve as a model for development in Rhinebeck.

Resistance to environmental actions can be traced primarily to limited communication between government and the community. There is no local newspaper to reach citizens with announcements regarding public hearings, and postings inside municipal buildings reach a

limited swath of the community. Recent expansion of Facebook groups and email lists are helping to create new communication opportunities, but there is still room for improvement. Stronger community engagement will make environmental actions both more efficient and more effective in the future.