

VISION

Copake, NY:

Woven by Water.

Vision of the Roeliff Jansen Kill, Bash Bish Brook and Taghkanic Creek in Columbia County, NY.

Copake's story – past, present & future, is woven by water.

Our common ground of social spaces is joined by trails and parks, blue ways and bikeways that connect our hamlets and distinguish our identity.

The pandemic brings into sharp focus our longstanding essential bonds with nature, with each other and with our community.

Our unique biodiverse environment provides clean air, safe drinking water and bountiful local food.

We adapt to challenges and changing climate, making Copake resilient, one backyard at a time.

These elements uphold our vision of a healthy, equitable, resilient and prosperous community inspired by nature at every turn.

GOALS

GOAL 1. INCREASE ACCESS TO OUR LINKED WATERWAYS FOR DIVERSE GROUPS OF PEOPLE

Our goal is to increase passive and active access to our linked waterways for diverse users. We are adding amenities and catalysts that engage people with our waterways. We envision recreation opportunities and advance projects that improve inclusiveness and accessibility for seniors, children, and people with disabilities, visitors, and young families. Trails, walkways, places to fish and swim, snowshoe, and ski and outdoor gathering areas provide abundant recreational opportunities to keep us all healthy.

GOAL 2. CONSERVE COPAKE'S UNIQUE BIODIVERSITY, ENVIRONMENT, SCENIC BEAUTY AND HERITAGE

Our goal is to conserve Copake's unique biodiversity, environment, scenic beauty, and heritage. We cherish and protect our diverse natural resources including waterways, aquifers, watersheds, waterfalls, kills, ponds and lakes, woods, meadows, and forests offering rich biodiversity and varied habitats for fish, wildlife, & plants. We protect historic structures, our agricultural heritage, and rural ways of living with water. We will undertake water quality improvements to protect our vital estuary and river systems, and the habitat, ecological functions, and biodiversity of our waterways.

GOAL 3. ADVANCE CLIMATE ADAPTATION TO FOSTER RESILIENT WATERWAYS AND LANDSCAPES

Our goal is to advance climate adaptation to foster resilient waterways and landscapes. Residents concerned about extreme weather encourage the Town of Copake to plan carefully and partner with local governments at all levels, landowners, farmers, and community organizations to reduce risk and prepare us for challenge and change. Incorporating nature and climate considerations into everyday decision making helps us to drive progress, provide long-term stability and resilience and comply with the NYS Community Risk and Resilience Act (CRRA) and other sustainability and resilience standards.

GOAL 4. CREATE VIRTUAL AND PHYSICAL CONNECTIONS BETWEEN OUR VIBRANT HAMLETS

We live, work, and play in four safe, fun, healthy hamlets that encourage collaboration and celebrate our community spirit. Our streetscapes, trails and community amenities are age-friendly and inclusive. A system of gateways, map and apps, way-finding and interpretative signs help people navigate the town. We promote our bicycling destination brand supported by friendly hamlet businesses. Our hamlets connect by waterfront, on-and-off-road walking and cycling trails and gathering spaces comfortably accessible to people of all ages, abilities and incomes. They attract visitors who help local businesses to prosper.



PRIORITY PROJECTS

There are three waterways being addressed in this plan: The Roeliff Jansen Kill (with Robinson Pond), the Bash Bish Brook and the Taghkanic Creek. These waterways stretch across the town, feed into multiple watersheds and possess unique environmental features. The waterways are part of four hamlets. Most land is used for residences and farming. Taconic State Park with Bash Bish Brook covers the eastern third of town. Copake Lake is not designated as an Inland Waterway by New York State, but is a significant resource.

1. RECREATION & RELATED PRIORITY PROJECTS

Copake offers a range of recreation amenities at Taconic State Park and in the community that help ensure the health of residents of all ages and abilities and draw visitors, especially cyclists, as part of promoting the town's emerging brand as a family-friendly bicycling destination.

- 1.1 Develop Waterfront Access at the Roeliff Jansen Community Library.** Work with the library to design and develop a gathering area along the Roe Jan Creek off Route 22 near Hillsdale. Working with the library, Copake will seek funding to design and construct other amenities including a unique playground or other destination to draw families visiting the library or from surrounding towns. The Harlem Valley Rail Trail will eventually continue along the west side of the Roe Jan, south of the library, making this one more amenity for trail users.
- 1.2 Consider Enhancements to the Copake Memorial Park on Mountain View Road.** The town will evaluate the current condition of the Memorial Park amenities and buildings, poll youth sports leagues and groups about current needs and interests and design and construct improvements to enable the park to serve a wide variety of Copake residents of all ages and abilities.
- 1.3 Identify Public Access Point Improvements.** Copake welcomes diverse waterfront users, including residents and visitors of different ages, abilities, cultures and incomes to use and celebrate our waterways. The Town of Copake will work with private owners and lake communities to expand access and improve the quality of experience at public spaces. Access points and related amenities discussed by the public to date include:
 - 1.3.1 Create Public Access at Twin Bridges Road.** The Roe Jan flows under the bridge at Twin Bridges Road on its way to Robinson Pond. There may be an opportunity to develop a walking path, fishing spot or other access although water levels in summer are minimal. It's a popular area for hunting and recreational shooting and special care would need to be taken to protect passive users.
 - 1.3.2 Old Railroad Depot at the South Entrance to the Copake Hamlet.** The Noster Kill, a protected trout stream, flows through the Old Railroad Depot, which is in poor repair. The property could make a strong connection to the hamlet and its acquisition should be considered if financial resources become available.
 - 1.3.3 Consider the Reuse of Old Rail Beds of the Central New England Railway.** The Town of Copake will advance efforts to evaluate the sites to determine alignments of the former routes to evaluate their current accessibility and condition and reuse feasibility.



- 1.4 Design and Build the Copake Spur.** Using data developed in this plan, the Town of Copake will seek funds to design and construct the Copake Spur. Engineering evaluation is being scoped and NYS DOT, permitting agencies and landholders will be engaged in 2021. A proposal to use a former “cow tunnel” under Route 22 and consideration of a high-visibility at-grade crossing on Route 22 have been eliminated from consideration. A scenario to connect in the vicinity of Weed Mine Road has also been eliminated because it would disrupt designated habitat for the endangered Eastern Cottontail. Spur trail options currently under consideration include 1. Upsizing the culvert under Route 22 near Valley View Road and Walt’s Dairy to accommodate a path alongside or under the bridge, and 2. Identifying a new route alignment beginning at the point where a new bridge along the Harlem Valley Rail Trail crosses Route 22 at Orphan Farm Road, potentially traveling south along Farm Road to the hamlet of Copake.
- 1.5 Advance Trail Networks at Taconic State Park.** Work to implement the Taconic State Park Trails strategy. The Trails strategy includes more than a dozen trails projects including connections between trails, trail extensions, rerouting, evaluation for and construction of accessibility enhancements, relocation or expansion of trail parking, trail improvements, coordination with Friends of Taconic State Park group, and addition of amenities like running water service. See [TSPTrailsPlanMapUpdated.pdf \(ny.gov\)](#).
- 1.6 Copake Hamlet to Copake Falls Bash Bish Brook Trail.** Working with private owners, the town will evaluate development of a path from Copake Falls along the west side of Bash Bish Brook to the north entrance of Weed Mine Road. The path requires a safe means of crossing Route 22. This would create an important connection between Copake Falls and the hamlet of Copake providing walking and biking access to the Copake Town park, playing fields, Town Hall, and Taconic State Park, as well as the two "downtown" centers from each hamlet.
- 1.7 Copake Hamlet Loop Trail.** The town will evaluate development of a loop trail beginning just north of between Dads Diner on Route 7A at the core of the Copake Hamlet and the former Hub Restaurant on Route 22 on private property that would be donated to the trail. The path would cross over the Bash Bish Brook and would provide an ideal recreational amenity for walking, biking, and fishing with immediate access in the "downtown" Copake Hamlet. The loop would also connect to the Copake Spur trail into the hamlet.
- 1.8 Support Completion of the Harlem Valley Rail Trail (HVRT).** In 1989, New York State bought the right of way of the former New York & Harlem Railroad to create a linear park following a 46-mile rail trail connecting Wassaic, NY to Chatham, NY. A segment that passes through Copake runs roughly 5 miles from Orphan Farm Road in Copake to Undermountain Road in Ancram, NY. The section from Millerton to the start of the Copake trail was recently completed. NYS Office of Parks, Recreation and Historic Preservation committed funding to connect the HVRT at Route 22 via a multi-use trail and bridge from Orphan Farm Road to Black Grocery Road.
- 1.9 Support Copake’s Emerging Brand as a Biking Destination.** Bicycling is one of the fastest growing types of outdoor recreation and tourism nationwide. It's estimated that 48 million people bicycle recreationally per year, contributing \$96.7 billion per year to the economy (2018, Outdoor Industry Association). Touring cyclists seek out low-traffic, scenic rural roads like those Copake offers. Bicycle travelers tend to be geotourists - people who National Geographic describes as “interested in experiencing the distinctive



characteristics of a place, including its culture, landscape, history, and the well-being of its residents.” Copake has been actively positioning itself as a biking destination for over a decade. Each spring the Antique Bike Auction at the Copake Auction attracts enthusiasts from across the world. In conjunction with that auction, the town promotes an Antique Bike Ride where local riders participate with penny farthings and other classic bicycles. Since 2012 Copake has partnered with the towns of Ancram and Hillsdale to sponsor the Roe Jan Ramble Bike Tour, attracting upwards of 200 riders annually in recent years with hundreds of family members participating. The Ramble is a non- competitive annual fall ride that begins and ends in Copake Memorial Park in Copake – offering a variety of routes of differing lengths and difficulties to accommodate families to experienced riders. This popular community event is sponsored by Copake, Ancram, and Hillsdale to raise money for continuing progress on the expansion of the Harlem Valley Rail Trail. While the Ramble did not occur in 2020 due to COVID-19, their website offers suggestions to keep riders moving in Copake using About the Bike Route Planner - Ride with GPS.

The town will add amenities that make it a year-round family-friendly biking destination. To appeal to touring bicyclists as well as local residents, Copake will work to provide safe and convenient bicycle access to all parts of the community through a signed network of on- and off-street facilities, low-speed streets, and secure parking. Stations will be located in each hamlet where cyclists can rest and make repairs at popular starting points for rides. The town will involve local cyclists in identifying road maintenance needs, safety, and ongoing improvements. Copake will reach out to help businesses understand the value of Bike tourism and help them to be ready to meet visiting, day tripping and local cyclists. Working with partners such as Taconic Hills School District, Empire FarmOn, Camphill Village and others, Copake will work to educate all road users to share the road and interact safely and to integrate road design and education programs so as to increase the confidence of new and special needs bicyclists. The town will evaluate the market/interest in a cyclocross or fat tire winter bike event or festival.

1.10 BUILD ON RECREATION TOURISM. Recreation tourism is an untapped opportunity. Visitors including seniors, millennials and tourists of different races and ethnicities are increasingly attracted to trails-based tourism. Biking, walking and hiking trails along with amenities like those at TSP and the planned Copake Spur and HVRT attract and engage visitors, increasing the likelihood that they will spend money locally and extend day trips into overnight or longer stays. Located close to urban areas including New York City, the network will appeal to a broad base of visitors.

1.11 Advance Plans to Support Birdwatching. Support the Rheinstrom Hill Audubon Center and Alan Devoe Bird Club to advance birdwatching.

1.12 Support Implementation of Plans for Taconic State Park (TSP). Help to implement the 2018 Master Plan and 2018 Trails Plan for TSP. TSP’s vision is to remain a premier destination for the public’s enjoyment: providing recreational opportunities, engaging visitors about the Park’s environmental, historic, and cultural resources, and being a place of inspiration and wonder at nature’s splendor. It will continue stewardship of natural resources, enhance habitats, protect its species and remain available for the enjoyment of future generations. See: [TSPMasterPlanMapUpdated.pdf \(ny.gov\)](#). Components of the Master Plan include: maintaining and enhancing the Park’s biodiversity, existing natural communities, endangered plants, and animals (including active monitoring of the New England Cottontail) and development of a comprehensive



invasive species management strategy; maintaining and enhancing recreational activities, the local trail system and connections to the local and long-distance trails including the Harlem Valley Rail Trail; implementing sustainable practices, infrastructure, operations and use of renewable resources; preserving, interpreting and branding the Copake Iron Works Historic District; developing internal and external signage for TSP including along the Taconic Parkway and state roads; expanding educational programming on environmental and historic themes; collaborating with State agencies, landowners, and organizations to build on the tri-state vision for the Park and protect the resilience of natural, cultural, and recreational assets; and using sustainable green infrastructure including ecologically sensitive operations, energy sourcing and use, water conservation, recycling, reduced mowing and native plant selection for revegetation. Priority projects include:

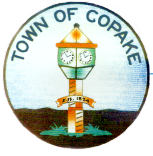
1.12.1 Support Improvements at the TSP Day Use Area. Help implement TSP plans to improve the day use area at Copake Falls with new courts and playing fields, a group fire ring, ice skating, a tot lot and off-leash dog run.

1.12.2 Consider the Need for More Fishing Access Including More ADA Compliant/Accessible Access. Fishing advocates were reticent to divulge the best locations, but participants did share that the upper part of the Roe Jan, upper part of Bash Bish, Maple Lane off Route 22, the bridge over the Bash Bish Brook and Roe Jan Park are destinations to evaluate. The Town of Copake will also work with TSP to develop ADA compliant fishing access near the junction of Orphan Farm Road and NY Rt. 22, utilizing an existing pull-off on NY Rt. 22 for parking. The partners will also explore viability of fishing/ADA accessible fishing at Odyssey Farm Pond. In addition to creating accessible destinations for the fishing public, these improvements help safeguard the habitat of native trout, eel and other fish.

1.12.3 Enhance and Expand Camping and Camp Sites. Copake will support efforts by TSP to improve amenities and add ADA compliant amenities including seasonal, off season and back country campsites; improved picnic areas and pavilions; comfort stations and showers; electric and running water service at selected campsites; and improved parking at Bash Bish Trailhead and at the Harlem Valley Rail Trail (HVRT) connection.

1.12.4 Provide Wi-Fi Hotspot(s) at Copake Falls for TSP. Enhancement of connectivity at TSP is the most requested amenity by visitors. The town will support TSP to establish hotspots at the Park office, the Iron Works Museum, Ironworker Cabins, Greenwich Cottages, and the campground.

1.13 Events and Promotion. Plan, expand and promote events and programming that brings the community together in the hamlets and along the waterways, including the Roe Jan Ramble, activities at the Copake Grange and other events that help distinguish Copake as an outdoor recreation and bicycling destination.



2. HISTORIC AND CULTURAL RESOURCES PRIORITY PROJECTS

- 2.1 St. John in the Wilderness Access Improvement, Trailhead Design and Development.** Support efforts with one of the town's most important National Register Listed heritage resources to provide greater access for the public. St. John in the Wilderness, designed by noted architect Richard Upjohn, requires stormwater and site accessibility improvements. A rain garden is planned to manage storm water runoff from the site which enters the Bash Bish Brook. This will help to mitigate recurring flooding from short-term high-volume precipitation. The property is surrounded by Taconic State Park and while it is a longstanding community access point, its hilltop location and very steep driveway are inaccessible for many users. The town will support efforts to fund an accessible pathway to the surrounding wilderness as well as the landmark site.
- 2.2 Promote Historic Assets at and near Taconic State Park.** Copake will continue to protect and promote the 19th Century Copake Iron Works, which is listed on the State and National Registers of Historic Places.
- 2.3 Secure designation of TSP as a Natural Heritage Area (NHA).** Congress designates NHA's as places where "natural, cultural, and historic resources combine to form a cohesive, nationally important landscape. NHAs are lived in landscapes that tell nationally important stories that celebrate the nation's diverse heritage. Through public-private partnerships, NHA's support historic preservation, natural resource conservation, recreation, heritage tourism, and educational projects. Leveraging funds and long-term support for projects, NHA partnerships foster pride of place and an enduring stewardship ethic. They help create jobs, generate revenue for local governments, and sustain local communities through revitalization and heritage tourism and encourage people to enjoy natural and cultural sites by providing new recreational opportunities. NHA's promote quality of life through new or improved amenities, unique settings, and educational and volunteer opportunities. They connect communities to natural, historic, and cultural sites through educational activities, which promote awareness and foster interest in and stewardship of heritage resources. By engaging community members in heritage conservation activities, NHAs strengthen sense of place and community pride."

3. ENVIRONMENTAL CONSERVATION PRIORITY PROJECTS

Copake supports a healthy environment and healthy people through land, water and air quality preservation and restoration projects.

- 3.1 Stream Crossing Management.** Continue to implement the Roeliff Jansen Kill Headwaters Road Stream Crossing Management Plan. Identify and prioritize road-stream crossing replacement projects including those that address inadequately sized culverts to reduce stream habitat fragmentation, improve community flood resilience and increase the ability for fish and wildlife to move freely in streams in Roe Jan Kill Watershed and headwaters of Taghkanic Creek, Bash Bish Brook and Agawanuck Creek. These projects improve habitat for native species such as Eastern Brook Trout and American Eel that migrate from the Hudson River estuary into streams to spawn. The Town Public Works office will evaluate, document, redesign and either improve or replace culverts/small bridges as possible. Bridges, open bottom box, and arch culverts spanning bank-full width or greater to minimize potential stream constriction are the recommended type of crossing structure.



3.2 Landowner Education. Copake will support efforts to educate landowners about the special natural features of their land including the increased value of trail and waterway adjacent properties. The Town of Copake will recruit owners as long-term land stewards and conservation partners of the ecologically significant features of the landscapes of Columbia County.

3.3 Advance Land Protection Efforts. Priorities for land protection include:

3.3.1 Protect the Harlem Valley Calcareous Wetlands. Copake will continue to advance actions to protect wetlands, their buffer zones and movement corridors including connecting wetland parcels and monitoring for invasive species. Past plans identify the ongoing need to field study/surveys for the bog turtle and other species needed.

3.3.2 Protect the Taconic Ridge. Taconic Ridge is a globally significant forest block that runs roughly 60 miles along NYS's border with Massachusetts. The Ridge occupies 2,700 acres of protected land in TSP and is part of a multi-state priority landscape area and part of the Lower New England Northern Piedmont Ecoregion. Copake will continue to prevent habitat fragmentation on ridge tops by inventorying resources and exploring protective measures to compliment the Scenic Resource Overlay.

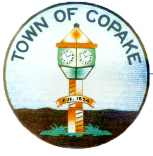
3.3.3 Plan for Areas of Known Importance/Rare Animals and Plants. The town will focus on maintaining connected habitat, understanding how species move and reducing habitat loss and degradation and fragmentation. The town will protect legacy floodplain forests and forest linkage zones. Copake will promote stewardship and land-use decisions that protect vernal pools, surrounding forest habitat and wildlife including managing habitat for forest, grassland, etc.

3.3.4 Agricultural Land Management. Over 35% of Copake's land cover within 300 feet of mapped streams is agricultural soil/use. With growing pressure on agricultural and waterfront lands for residential development, Copake risks the loss of natural cover/increase of impervious cover. The town will support outreach to local farmers to minimize the impact of agricultural operations and animal waste on streams by using best management practices to protect floodplains and riparian buffers.

3.4 Advance Water Protection Efforts. The Town of Copake will continue to minimize development impact on water quality including acquisition, conservation easements, land use regulations, zoning, conservation subdivision, the Scenic Corridor Overlay Zone and directing residential growth to hamlet centers. Copake will support community education efforts related to stormwater management including reporting of illicit discharges and construction site runoff control, post-construction runoff control, pollution prevention. The town will carefully evaluate developments proposed along Roe Jan and Taghkanic Creek to consider potential sensitivity of aquifer. Areas around Copake Lake and Robinson Lake and the hamlets Copake and Copake Falls exceed recommended levels to minimize nitrate loading and conserve base flow to streams. Copake will support measures to maintain Taghkanic Creek as a public water supply for the City of Hudson, including potentially a protection program for local water supply sources and their watersheds or recharge areas. Specific projects include:



- 3.4.1 Consider Protecting Streams, Floodplains, Wetlands and Other Environmentally Sensitive Features Through Supplemental Development Standards.** The Town of Copake will consider using additional standards for properties within a Stream Overlay Corridor District through site plan review to ensure that an action will not result in erosion or stream pollution from surface or subsurface runoff. In making such determination, the local boards will consider slopes, drainage patterns, water entry points, soil erosivity, depth to bedrock and high-water table and other relevant factors.
- 3.4.2 Support Stewardship at Robinson Pond.** Support efforts by the Robinson Pond Citizens Statewide Lake Assessment Program (CSLAP) to educate the community about stewardship of Robinson Pond, including scheduled beach maintenance, notifications about safety for swimming, designated swimming/beach areas, boat use and registration, guidelines for docks and piers and their maintenance, etc.
- 3.4.3 Monitor and Address Issues Related to Impairments of Robinson Pond.** The Town of Copake will closely monitor the status of the impairments at waterbodies and encourage use of green infrastructure whenever possible. Both EPA and DEC consider Robinson Pond to be impaired by urban/storm runoff, construction, agricultural runoff and on-site septic issues resulting in moderate water clarity, high algae levels and high nutrient levels, especially phosphorus, high susceptibility to harmful algal blooms and shoreline algal community that exhibits periodically high toxin levels. NYS DEC requires that development disturbing one or more acres and/or discharging into the pond must have a Stormwater Pollution Prevention Plan. If the project could entail “traffic, visual, groundwater, or stormwater impacts” the Board may require a Stormwater Management Plan (SMP). A SMP evaluates “hydrological and hydrological-dependent characteristics of the land to be developed, the potential and predicted impacts of land development on the local hydrology, and the effectiveness and acceptability of all measures proposed by the applicant for reducing adverse impacts.” This permitting usually relies on the effective FEMA Flood Insurance Study and Flood Insurance Rate Map (FIRM) which date to 1979-1980 in Copake and do not consider climate change projections or other impacts. FEMA has not announced any plans to remap the area.
- 3.4.4 Monitor and address issues related to impairments of the Taghkanic Creek.** The 13-mile reach from the mouth of the Taghkanic Creek in Hillsdale, flowing through Craryville to New Forge Road in Taghkanic NY is listed as threatened in the Lower Hudson River Basic Waterbody Inventory and Priority Waterbodies list. The Town of Copake will closely monitor the status of the impairments and encourage use of green infrastructure and other mitigation measures whenever possible.
- 3.4.5 Support development of a Connectivity Plan for the Upper Taghkanic Creek Watershed:** The town will support The Columbia Land Conservancy and a committee of residents to develop a Connectivity Plan a to protect the forests that surround the Upper Taghkanic Creek. The CLC describes the project as follows: “The plan will assist residents, landowners, local decision makers, and others in prioritizing and protecting natural areas. It will also identify large areas of forests, wetlands, and natural areas as well as the lands and waters that provide corridors for wildlife within the watershed. The landscape and waters provide clean drinking water for Taghkanic, Hillsdale, and



Copake, as well as the City of Hudson. Copake residents will join others from towns in the watershed to prepare the plan to preserve and protect the forests, streams, and wetlands in the headwaters of the Taghkanic Creek watershed.

- 3.4.6 Monitor Estuary/Tributary Health.** The NYSDEC Hudson River Estuary Program Stream Condition Index measures stream health based on natural cover, impervious cover, brook trout abundance, density of dams, distance without aquatic barriers and density of infrastructure crossings. Thirty-six miles of the 80 miles of streams in Copake received a low or lowest score on the index. Much of the main stem of Roeliff Jansen Kill, Taghkanic Creek, Copake Lake and Robinson Pond, among others, show below average index scores indicating a low amount of natural cover in the watershed, limited aquatic connectivity and high density of dams. The Town of Copake will closely monitor the status of the impairments and encourage use of green infrastructure and other mitigation measures whenever possible.
- 3.4.7 Support Completion of a Roe Jan Watershed Study.** NYS DEC recommends additional studies of the Roe Jan watershed be completed to determine the presence/impact of macroinvertebrates. The last study (1993) showed potential impacts from agricultural runoff and faulty septic tanks.
- 3.4.8 Advocate for Designation as Multi-State “Priority Landscape Area” Through USDA Forest Service’s Federally Led Landscape Scale Conservation Initiatives Program.** This designation as a Priority Landscape Area will increase eligibility for forest conservation-related projects and for Federal funding sources (e.g., land conservation, trails and recreation projects, landowner stewardship outreach). The Berkshire-Taconic area is an important forested landscape that crosses the mountains of Connecticut, Massachusetts, New York and Vermont. The conservation strategy for this area includes land protection, ecological restoration, applied conservation science, collaborative land management and collaboration with local communities. Ongoing efforts include USDA Forest Service Forest Legacy land acquisition, the New England Governors’ Conference Keeping Forest as Forest grants, and multiple NGO partnerships including the Rensselaer Plateau Alliance.
- 3.4.9 Maintain a Healthy Vegetative Buffer (Riparian Edge).** Consistent vegetated buffers reduce the influx of potential nutrient-laden runoff from the adjacent properties into the waterways. Riparian areas contribute to floodplain health as well as wildlife habitat, water quality and water temperature. Riparian buffers filter sediments, nutrients (phosphorus and nitrogen), pesticides and other pollutants in runoff. They stabilize stream banks and beds, reduce erosion and restore and maintain the chemical, physical and biological integrity of water resources such as streams, lakes, wetlands or vernal pools. The streamside vegetation in a forested buffer system shades the stream and keeps the water cool, which is of critical importance for Native Brook Trout as well as the introduced Brown Trout. Planted native trees, shrubs and grasses use excess nutrients before they reach the streams. Porous grass-covered land within the buffer can increase infiltration and water storage, absorb nutrients, control concentrated runoff and evenly spread surface flow.



The town will support efforts to identify, restore and maintain broad buffer zones of natural vegetation along streams, along the shores of other water bodies and wetlands and at the perimeter of other sensitive habitats including: 1. Informing the direct abutters of the waterways and the public about the importance of maintaining an appropriate vegetated buffer along the perimeter; 2. Maintaining and restoring vegetated stream buffers and providing flexibility in buffer design to protect natural resources such as freshwater wetlands, steep slopes and the 100-year floodplain; 3. Protecting local wetlands to provide flood control, wildlife habitat, recreation areas and natural water quality treatment; 4. Encouraging planting of native vegetation in buffers; 5. Protecting adequate streamside vegetation necessary for maintaining clean, cold-water habitat for native species like Brook Trout and 6. completing more detailed studies needed to identify opportunities for protection and restoration of riparian areas in Copake. Trees for Tribes, USDA Conservation Reserve Enhancement Program are potential sources of support.

4. CLIMATE CHANGE AND RESILIENCE PRIORITY PROJECTS

Resilient land management requires individuals to act together and learn to be strategic about choices that influence their landscape – their property and their back yard. Across the county, direct engagement with landowners is proving an effective tool for encouraging landscape changes. While climate change and flood risk are bigger than any one person can resolve, each best practice used by just one person contributes to a resilient community.

- 4.1 Implement Relevant Components of the Columbia County Multi-Jurisdictional Hazard Mitigation Plan (2018).** In addition to recommendations included in other sections, the Town of Copake will update and maintain a current plan for delivery of emergency response services.
- 4.2 Become a Certified Climate Smart Community.** In 2011 the Town of Copake passed a resolution taking the NYS DEC Climate Smart Community Pledge. Climate Smart Communities (CSC) is a New York State program that helps local governments take action to reduce greenhouse gas emissions and adapt to a changing climate. The program offers free technical assistance, grants, and rebates for electric vehicles. Registered communities have made a commitment to act by passing the CSC Pledge. Certified communities are the foremost leaders in the state; they have gone beyond the CSC pledge by completing and documenting a suite of actions that mitigate and adapt to climate change at the local level. Copake is in the process of advancing the actions needed to become a certified community.
- 4.3 Address the Significant Risk of Summer Heat Waves.** Increasingly hot summers are a stressor to people as well as crops and livestock productivity in Copake, where approximately one third of land is in agricultural use. Copake will support efforts to increase availability of adequate water resources for crops and livestock; encourage use of crops that perform well under extreme conditions; implement a community emergency plan for high-heat events; establish shaded public spaces and designate community cooling centers.
- 4.4 Address the Risk of Short-Term Drought.** Short term drought is of particular concern for Copake due to low well yields and high percentage of agricultural land. Copake will support a best practices program for water conservation and use (e.g., increase rainwater harvesting, protect existing natural infrastructure including forests and wetlands, and reduce impervious cover, etc.).



- 4.5 Address Risk of Increased Flooding Along Roe Jan Kill.** Copake will monitor effects of stormwater runoff in areas developed beyond recommended density thresholds. The Town of Copake will integrate flood management strategies into municipal and emergency planning, create natural vegetated shoreline and stream buffers to protect assets, right size culverts, promote best practices for flood prevention such as use of green stormwater infrastructure and conserve natural areas that contribute to stormwater management.
- 4.6 Develop a Copake Resilience Corps.** A Resilience Corps would advance natural and related flood mitigation measures town wide in a partnership between local governments, conservation groups, nonprofits and property owners. An action plan will be developed for the Corps, which will include delivering community education and stewardship, implementing site-specific natural mitigation projects, conserving flood protective natural features, working with farmers to stem runoff and erosion, monitoring all infrastructure, clearing streams and roadside ditches and culverts, maintaining roads, replanting the riparian edges and areas, expanding natural wetlands, expanding or constructing wetlands and preserving and expanding forests, etc. Volunteers will be called upon to monitor the condition of culverts, bridges, roadside ditches, and floodwater swales and report their condition to the Department of Public Works. This will enable the Town of Copake to regularly remove debris and reduce blockages that constrict the floodway and cause or worsen local flooding.
- 4.7 Support Parcel Specific Climate Adaptation Actions.** Property owners report worsening flooding that is eroding riparian edges, weakening vegetative buffers and damaging property. In a town where most waterway-adjacent land is privately owned, a stewardship approach of coordinated voluntary or publicly subsidized action by private property owners is a fundamental component of Copake’s climate adaptation strategy. Constructed measures like a berm or wall are unlikely to be feasible, cost effective or permitted by local, State, or federal regulators. The Town of Copake will provide technical assistance to help property owners choose and effectively implement natural mitigation measures for flooding on private property without displacing excess floodwater downstream or to adjacent lands.
- 4.8 Encourage the Use of Green Infrastructure.** Ensure local boards and officials understand green infrastructure practices and regulations and require them, where appropriate, for developments that require post-construction stormwater management. Different practices are appropriate for different sites, and it's essential that these practices are sized/designed correctly, constructed appropriately and well-maintained. The Roeliff Jansen Community Library is a great local example of multiple green infrastructure practices, including porous concrete and a vegetated swale. The town will also promote the use of green infrastructure by homeowners by encouraging them to plant trees and use swales, pervious paving, rainwater gardens, green roofs, planters, infiltration gardens, disconnected downspouts and curb extensions, etc. The town will encourage reduction/removal of impervious surfaces that increase runoff of stormwater, pollutants and sediment into the streams to improve water quality, reduce local flooding and maintain natural conveyance capacity. This is of particular concern around Copake Lake and Robinson Pond which are impaired by urban runoff.
- 4.9 Revise the Town’s Flood Damage and Prevention Codes.** The Town of Copake will use model code provided by NYS Department of Transportation, modified to meet its needs. This is a critical task to ensure that



Floodplain Permits are properly issued for new development. The revision will bring the town's code into compliance with the NYS Building Code, which requires two feet of freeboard above the base flood elevation. The advanced age of FEMA Flood Mapping means that definitive data about base flood elevation is not available and developers will need to provide elevation certificates along with permit applications.

- 4.10 Address Local Flooding and Advocate for FEMA to Update Copake's Flood Insurance Study and Related Mapping.** The Town of Copake is surveying property owners to identify areas subject to flooding and to determine the apparent cause of the hazard. Once vulnerable sites have been identified and evaluated, mitigation measures will be identified and advanced. As possible, Copake will seek funding to support private property owners to address or reduce flood impacts. The town will advocate with FEMA to conduct a flood insurance study or comparable effort to determine current floodrisk more accurately town wide.

5. HAMLET REVITALIZATION PRIORITY PROJECTS

- 5.1 Develop Online Wayfinding Strategies.** The town will partner with community groups to use social media, the Town of Copake and Copake-Waterfronts websites, and seek support to develop a downloadable wayfinding application for multiple transportation modes to facilitate online promotion and wayfinding.
- 5.2 Physical Wayfinding in Communities.** Coordinated signage is necessary to orient visitors to the town and its assets. Copake will design and install a comprehensive way finding system using unique typology and iconography to define linkages between the hamlets, between the waterways and between hamlets and the waterways. The town will support development of online mapping applications to unify the hamlets such as "you are here" features that provide direction to routes that connect hamlets. Mapping will clearly identify Route 22 as a designated bike route. The town will use signage to identify bike routes that link the hamlet and create an app that does not depend on cell coverage to provide trip guides. The town will seek funding to construct informational kiosks as part of a way-finding system (including amenities in other hamlets and along all waterways). The kiosks help to interpret the town's unique history and educate residents and visitors about the town's unique ecosystem. The kiosks will expose visitors to the region's beauty, scenic attributes, and recreation experiences, building recognition of the uniqueness of Copake, Columbia County and the Berkshire/Taconic landscape.
- 5.3 Advance Gateway Improvements.** Copake will define beautiful gateways that create a sense of arrival while calming speed. The town will identify key gateways and evaluate existing gateway treatments or enhancements and identify needs and opportunities. A prioritized list of enhancements for each priority gateway will be developed indicating location, access, components and estimated costs.
- 5.4 Advance Streetscape Improvement.** The town will continually improve streetscape and physical environment. Copake's four hamlets have very different streetscape conditions. There is significant need to better define the public realm and create space that is safe, healthy, accessible and inclusive. This includes adding pedestrian safety amenities that will help keep year-round visitors safe, like high visibility crosswalks, clear branded signage, curb extensions and bollards. Developing an effective streetscape program requires a keen focus on walkability (sidewalks, crosswalks, accessibility) and on creating attractive human-scaled spaces with landscaping and tree planting, benches, lighting, banners and seasonal flowers, public art and



building murals among other enhancements. In partnership with property owners this effort may also include façade improvement programs and commercial building retrofit for commercial structures. This effort will build on analysis of sidewalks and streetscape conditions to identify repairs, gaps in segments, opportunities for landscaping or street trees, street improvements for bicyclists including widened shoulders and share the road signs.

5.5 Continue to Advocate for Comprehensive Town-Wide Broadband Service Focusing on Connected Hamlets.

The lack of broadband service has been repeatedly identified as an impediment to businesses relocating to Copake. With migration from urban areas intensifying because of COVID-19, changing climate and an increasing base of retirees, this obstacle is more important than ever as an economic development issue. Lack of “real time” connection is also an impediment to visitor wayfinding and amenity access. The 2018 Copake Broadband Status map shows swaths of broadband coverage awarded to FairPoint (Phase II & III) and areas covered by the NYS Public Service Commission (PSC), with the remaining areas not currently eligible. In March of 2019 it was reported that 50% of the Town remains unserved by broadband, including in the most densely populated areas.

5.6 Copake Hamlet Enhancements. The Town of Copake is advancing recommendations from the design and development plan for the main Copake hamlet including connecting to the Harlem Valley Rail Trail via the Copake Spur; connecting the Memorial Park to the hamlet core with an off-road path; evaluating strategies to develop affordable housing; and creating shared parking on excess paved areas and existing lots. The major transportation project getting underway is the Route 7A reconstruction project to improve highway conditions and enhance safety for all route users. The project is coordinated by Columbia County Department of Public Works. It is supported by the Copake Hamlet Highway Rehabilitation Citizens Advisory Committee and the community. The project has been approved for the design stage and meetings on the design commenced in 2020. The construction start target date is summer 2022 and the anticipated cost is approximately \$4.5 million. As appropriate, the Town of Copake will continue to advance the need for public water and sewer infrastructure in the Hamlet of Copake. The town will continue to advocate for development of public water and wastewater services in the main Copake hamlet, enabling it to maintain density and attract mixed use development. The town will continue to preserve the Copake United Methodist Church and Cemetery, the Copake Grange Hall and the Copake Memorial Clock.

5.7 Copake Falls Enhancements. The town will continually improve recreation amenities accessed through Copake Falls. Copake Falls is home to the Copake Iron Works historic resources and the gateway to the Taconic State Park, the town’s most significant recreation cluster with new and improved amenities planned. In addition to the Iron Works cultural resources, Copake Falls includes the Roeliff Jansen Historical Society Museum (housed in former Methodist Episcopal Church building on National Register of Historic Places) and the Church of St. John in the Wilderness.

5.8 West Copake Enhancements. The town will continue to support development and programming at Empire Farm. Empire Farm and Farm on Foundation includes onsite programming (a farm accelerator, internships, farm shares/CSA, camp Farm-On, a teaching kitchen and cookbook library) and community programming (Milk Money program, the Victory Garden, and Chef to Farm program). The town supports Empire Farm programming and events including the Big Apple Crunch and Farm on Hootenanny, farmhouse rental and



the Farm and Film lab. Copake will support preservation of historic resources including the West Copake Reformed Church on County Route 7, established by Dutch settlers, and the West Copake Cemetery (adjacent to church). Copake also supports the ongoing work of Camphill Village including efforts to implement their 2019-2021 strategic plan goal to promote agricultural sustainability including their ongoing focus on biodynamic/organic agriculture and operation of the oldest biodynamic seed company in North America. Their certification as a biodynamic farm by Demeter USA (the only certifier for Biodynamic farms and products in America) exceeds State and federal organic certifications with stricter requirements and greater emphasis on on-farm solutions for disease, pest, and weed control, and in-depth specifications around water conservation and biodiversity.

5.9 Craryville Enhancements. The town will continue to support plans and programs of the Taconic Hills Central School District. Taconic Hills, located in Craryville, serves ten towns in Columbia County, including Copake. The District is undertaking capital projects related to security, tennis court reconstruction, parking, and accessibility upgrades, building air conditioning and mechanical and plumbing equipment upgrades. Improvements include an 800 SF greenhouse classroom with geothermal system completed in 2020 to support plant science, Future Farmers of America (FFA), family and consumer science, nutrition in health, general science and physics courses. The District also intends to use the greenhouse to grow plants that support the school cafeterias' food services.

The town will also support the Taconic Hills Central School District's partnership with Trout Unlimited. *Trout in the Classroom* is a unique, hands-on, STEM-focused, environmental education and conservation program for students of all ages. In Copake, third graders raised Brown Trout in the classroom, learned about the importance of conservation, pH levels, monitoring water quality and maintaining healthy ecosystems, and the trout's life cycle. The program celebrated with release of Brown Trout in spring 2020 in the Roeliff Jansen Creek. After Taconic Hills wrapped up a successful year in 2019, Trout in the Classroom relaunched across the state, bringing in more than 250 schools throughout the State. The program brings stewardship learning and an appreciation for healthy streams right into the classroom by engaging students, teachers, and the school community. TU Chapter and volunteer support helps with trout tank set-up, teacher professional learning opportunities, and bus trips to the watershed streams during the spring trout releases (<http://www.troutintheclassroom.org>).