

HARLEM VALLEY RAIL TRAIL

INTERIM MANAGEMENT GUIDE

October 3, 2011

Prepared by Salim Chishti Planning Unit OPRHP



**State of New York
Andrew M. Cuomo, Governor**

**Office of Parks, Recreation and Historic Preservation
Rose Harvey, Commissioner**



New York State Office of Parks, Recreation and Historic Preservation

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Andrew M. Cuomo
Governor

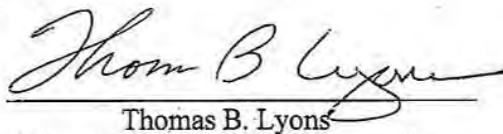
Rose Harvey
Commissioner

Approval of the Interim Management Guide for the *Harlem Valley Rail Trail*

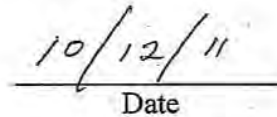
This Interim Management Guide (IMG) provides a “snapshot” of the existing conditions and day-to-day management of the Harlem Valley Rail Trail. It also identifies projects that may be undertaken in the near future, and the type of reviews and resources required for those actions. This IMG provides for safe public access, appreciation, and protection of the recreational, natural and cultural resources of the Harlem Valley Rail Trail.

This is approval of the IMG for use by OPRHP and its Partners for the continued management and development of the Harlem Valley Rail Trail. The IMG will be updated as appropriate.

OPRHP recognizes and very much appreciates the participation of partners in not only the preparation of this IMG but, even more so in the advancing the completion of this valuable resource.



Thomas B. Lyons
Director of Resource Management



Date

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Table of Contents

I. Statement of Purpose	9
II. Park Profile	11
III. Introduction	13
Introduction to the Trail	13
Regional Setting and Recreational Need	14
IV. Inventory and Resource Management.....	17
Recreation Resources	17
Physical and Natural Resources	19
Cultural Resources	24
Considerations	25
Scenic Resources.....	25
V. Infrastructure	29
Existing Conditions	29
Considerations	30
Management Strategy.....	30
VI. Park Operation	33
Overview	33
Access and Fees	34
Staffing and Maintenance.....	34
Partnerships	34
VII. Security Management Plan	37
Fencing.....	37
Public Notification	37
Property Patrol.....	37
Coordination with Other Agencies.....	37
Safety & Logistical Concerns.....	37
VIII. Public Safety Management Plan	39
Signage.....	39
Trail Section Names	39
Trip/Fall Hazards.....	39
IX. Environmental Review and Future Planning	41
X. References	43

List of Figures

(all figures are found at the end of document)

- Figure 1 – Location
- Figure 2 – Ownership Status
- Figure 3 – Trail Sections
- Figure 4 – Wetlands
- Figure 5 – EPF Grant Area
- Figure 6 – Collapsed Culvert Area

I. Statement of Purpose

The purpose of the Harlem Valley Rail Trail (HVRT) Interim Management Guide (IMG) is to provide direction for the continued and improved provision of recreational opportunities, provide recommendations for patron amenities with an emphasis on the safety of park patrons, provide guidance for continued protection of natural resources and recommend programming for public awareness of the ecological significance of the trail and its environs. This guide defines provisions for continuing recreational activities that have been traditionally allowed. The primary use of the facility is a recreational trail.

The guide provides direction for partners, managers and staff for the day-to-day operations, stewardship, maintenance, and improvement of the trail to ensure the safety of patrons and staff. This interim guide provides a profile of current conditions and operation of the HVRT as well as steps to advance its completion. It also identifies the type of actions that may require environmental review including those that may trigger the preparation of a master plan. A master plan, if deemed necessary, would identify long-term uses, alternatives for their provision and potential impacts and include public participation.

II. Park Profile

Region: Taconic

County(s): Columbia and Dutchess

Trail Manager:

- a) In Dutchess County Section – Dutchess County, Harlem Valley Rail Trail Association, Town of Amenia, Village of Millerton, Town of Northeast
- b) In Taconic State Park - Ray Doherty
- c) Copake Falls to Chatham – TBD (Taconic Regional Office)

Endpoints:

North: Village of Chatham

South: Wassaic Metro North Station

Telephone:

- a) Harlem Valley Rail Trail Association 518-789-9581
- b) Taconic State Park 518-329-3993
- c) Dutchess County Parks 845-298-4600
- d) Taconic Regional Office 845-889-3840

Operating Season: Year-round

Nearest Municipalities: Towns of Amenia and Village of Millerton, Dutchess County; Towns of Ancram, Copake, Hillsdale, Ghent, and Villages of Philmont and Chatham, Columbia County.

Senate District: 40 – Greg Ball;
41 – Stephen M. Saland

Assembly Districts: 103 - Marcus Molinaro, 127, Peter D. Lopez.

Park Classification: Linear Park

Established: Various sections acquired from 1989 to present.

Waterbodies: Ore Pit Pond at Taconic State Park – Copake Falls area.

Recreation Resources: 46-mile trail for Hiking, Biking, Cross-country skiing, Snowshoeing.

Historic Resources: Route of Harlem Valley Railroad

Scenic Resources: Views of Taconic Ridge, agricultural scenery, proximity to Bash Bish Falls.

Major Uses: Hiking and Bicycling

Yearly Attendance: 75,000 per year (estimated).

III. Introduction

Introduction to the Trail

The Harlem Valley, located in Putnam, Dutchess and Columbia Counties, New York, is an area between Brewster, NY and Hillsdale, NY. The area contains many communities, agricultural lands, wetlands, floodplains and stream valleys. It is named after the New York & Harlem Railroad, the first rail line constructed through the area in the mid to late 1800's. After a series of ownership changes the line later became known as the Upper Harlem Line as part of the Penn Central Railroad and later the Conrail system. This railroad line once connected New York City with Harlem Valley communities and Chatham, NY. In 1979 as part of a restructuring of the debt of the bankrupt Penn Central the tracks and ties were removed from Wassaic to Chatham. (HVRTA, 2011) (Figure 1)

In 1989, the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) purchased 22 miles of the right-of-way from Wassaic to Copake Falls, NY to build a linear park, the Harlem Valley Rail Trail (HVRT). In 2006-2011 additional parcels north of Copake Falls were purchased by OPRHP and also gifted to the agency from The Harlem Valley Rail Trail Association to begin completing the trail to the Village of Chatham, NY. Acquisition of parcels is ongoing at this time. (Figure 2)

The existing, open portions of the trail are exceedingly popular and are ideal for walkers, runners, bicyclists, cross-country skiers, hikers, and others who want to enjoy the beauty of the Harlem Valley landscape. The trail's flat to gentle-sloping grade allows for access by wheelchair users and others with mobility limitations. The trail has been touted by many diverse interest groups as an excellent destination for active tourism. The trail adds greatly to the recreational opportunities in the Taconic Region. Extension of the trail to Chatham, NY will further enhance the recreational opportunities it presents.

Ultimately, the HVRT is envisioned as a continuous, off road, right of way from the Metro North Wassaic Train Station to the Village of Chatham, New York.

This Interim Management Guide presents a profile of the trail in total and specific recommendations for both the developed and undeveloped sections of the trail.

Table 1 presents the locations of divisions of the trail used for descriptive purposes. These divisions were developed by the Harlem Valley Rail Trail Association on their website and in their literature (HVRTA, 2011). Figure 3 provides information about each trail division and current construction status. This IMG uses these segments to identify the location of the trail's natural and cultural resources that are described.

Table 1 Guide to sections used in the IMG

Section	Approximate end points
1	Metro North station in Wassaic north to Mechanic Street in Amenia, NY
2	Mechanic Street in Amenia, NY to Coleman Station in the Town of North East, NY
3	Coleman Station in the Town of North East, NY to Main Street in the village of Millerton, NY
4	Main Street in the village of Millerton, NY to Under Mountain Road in the Town of Ancram, NY
5	Under Mountain Road in the Town of Ancram, NY to the Taconic State Park entrance in Copake Falls, NY
6	Taconic State Park entrance in Copake Falls to the village of Chatham, NY

Source: HVRTA, 2011. See also Figure 3 for location information

Regional Setting and Recreational Need

The trail is set in the Taconic Region of OPRHP encompassing Westchester, Putnam, Dutchess and Columbia Counties. The Taconic Region contains 12 state parks, 6 historic sites and 2 golf courses. Trails are an integral part of the recreational opportunities offered by the parks (the HVRT passes through Taconic State Park). The trails in the parks vary from local loops to a segment of the Appalachian Trail in Clarence Fahnestock Memorial State Park.

The Taconic Region also contains the Old Croton Aqueduct Historic Park which is a similar multi-use recreation trail along the length of the historic Aqueduct. Another trail in the surrounding area is the Dutchess Rail Trail (DRT). When finished, the DRT will be a 12-mile multi purpose recreation trail in Dutchess County from East Fishkill to the City of Poughkeepsie, passing through the towns of East Fishkill, Wappinger, LaGrange, and Poughkeepsie. Currently approximately 9.5 miles of the DRT are open. (Dutchess County, 2011)

Columbia County has several trails on public conservation area lands owned and managed by the Columbia Land Conservancy (CLC). Public trails also exist in the county on state-owned land. In addition numerous unused rail corridors, utility rights-of-way, equestrian trails and other linkages could be utilized to create a network of trails through the county. (CLC, 2011) This trail network could be connected to the HVRT in Chatham.

The HVRT is unique in the area in that it provides both recreation and transportation links. The trail links numerous towns and villages in Dutchess and Columbia Counties, making pedestrian and bicycle access easy and safe. It also links to towns and villages to the south of the area and New York City through the connection with Metro North Railroad. Metro North allows (by permit) bicycles on their commuter trains. This makes it very easy for people living along the train line to utilize the hiking, biking, and other opportunities available on the trail without having to travel far by personal motor vehicle.

The surrounding area has other recreation and trail opportunities. The Hudson River Valley Greenway (HRVG, 2011) is working to create a system of trails from the northern borders Saratoga and Washington counties to Manhattan. The Hudson River Greenway Trail System consists of two main components: a land trail and a water trail for paddling and boating. A major route included in the land trail is Bike Route 9, a North-South on-road bicycling trail which

passes through Columbia and Dutchess Counties. Links between the greenway and the HVRT are planned. The HVRTA is currently seeking designation of the HVRT as a Greenway Trail.

Further afield, residents of Columbia and Dutchess Counties utilize trail resources in neighboring states to the east.

- The Ashuwillticook Trail is an 11.8 mile multi-use trail on a former rail bed that runs between Lanesboro (just north of Pittsfield) and Adams, Massachusetts. It is very popular with bicyclists, joggers, in-line skaters and walkers in the summer and cross country skiers in the winter.(DCR, 2011)
- The Taconic Crest Trail is a hiking trail that runs from U.S. Route 20 in Hancock, Massachusetts, less than 1 mi east of the New York border, north along the ridgecrest of the Taconic Range. The 35.4 mile trail weaves along the border of New York and Massachusetts and New York and Vermont, and ends in Petersburg, New York on NY Rte 346, near the Vermont border. (Berkshire Hiking, 20011)

IV. Inventory and Resource Management

Recreation Resources

The recreation management strategies provide guidance for managing existing recreation activities until a Master Plan/EIS is completed and insuring these activities are compatible with the environmental resources while providing a safe environment for the user. The Master Plan/EIS will consider these and other potential compatible use activities and facilities.

Existing Conditions

The primary activities of the Harlem Valley Rail Trail are those that are trail related. For active recreation in the open sections this includes hiking, walking, jogging, bicycling, in-line skating, cross-country skiing and snowshoeing. Currently there are no horses or motorized vehicles allowed on the trail.

It is the intention of OPRHP and its partners to provide the same kinds of trail activities in the new sections as they become available.

Considerations

- Design, maintenance and management of open and new sections.
- Provide a safe and enjoyable trail experience for a variety of users.
- Minimize user conflicts.
- Protect surrounding natural and cultural resources.
- Design trail to accommodate several types of use.
- There are other recreation resources in the area served by the trail.

Management Strategies

- Keep open sections of the trail as currently maintained and managed through an agreement with Dutchess County. The County has agreements with the HVRTA for volunteer work to help maintain and manage the trail.
- Negotiate and develop agreements with partners such as the counties, towns, and villages governments, HVRTA or other grass roots organizations for managing and maintaining newly opened sections of the trail.
- Trail design should take into account the American Association of State Highway and Transportation Officials (AASHTO) standards for trail design and the Americans with Disabilities Act and Architectural Barriers Act accessibility standards.
- Trail design of new sections and upgrades of existing open sections will conform with Americans with Disabilities Act (ADA).
- Trail will remain closed to equestrians but there will be an inventory of existing equestrian facilities in the area for possible linkages to the trail.

- Trail will remain closed to motorized use including ATV, off road vehicle and snowmobile use.
- Inventory other existing recreation resources within the area served by the trail. Promote connections between the trail and these resources. These may include:
 - Nature preserves
 - Libraries
 - Fairgrounds
 - Swimming areas
 - Schools and sports fields
 - Sports clubs such as gun clubs
 - Other multiuse trails
- Trail design should include drainage and stormwater management best practices.
- Road crossings will be kept to a minimum.
- Open sections will be monitored for user conflicts and solutions to those conflicts instituted.

Environmental Education / Interpretation

Existing Conditions

Environmental Education and Interpretation (EE&I) opportunities exist along the HVRT, but limited effort has been put in to developing interpretive programming. The HVRT offers a substantial opportunity for EE&I along its entire length. A full range of resources - natural, historic, community - are waiting to be tapped for EE&I.

Considerations

- Historic buildings and National Register areas are close to the trail.
- The trail is on a historic rail-road route.
- A variety of natural resources exist along the trail.
- Scenic resources exist along the trail.

Management Strategies

- Outreach to organizations that provide interpretive programming such as Audubon, Columbia Land Conservancy, Farmscape Ecology Program (Hawthorne Valley Farm, 2011)
- Partner with local groups to use volunteers as instructors in EE&I programs on the trail.
- A plan for interpretation of the trail's surroundings should be produced, including interpretive signage and brochures.
- Outreach to town and village historians for interpretive programming.
- Outreach to school districts to coordinate education programming.

- Develop and implement an interpretive signage program which incorporates information on natural, historic and scenic resources of the trail.
- Develop and implement interpretive walks and talks along the trail.
- Work with partners to develop promotional resources such as brochures, cell phone tours, pod casts, etc. Use local resources for development of these resources such as computer education programs at local colleges. (Columbia-Green Community College, Bard, Simon's Rock, etc.)
- Develop one or more outdoor classrooms on the trail where space allows. Can be very simple design.

Physical and Natural Resources

Natural resources include geology, topography and soils; terrestrial and aquatic ecology; and hydrology.

Geology, Topography and Soils

Geology The area this IMG covers is at the eastern edge of the glacial till upland subsection of the Hudson-Mohawk Lowlands physiographic region. The glacial till uplands form a geologic connection between the Taconic Mountains section of the New England Upland to the east and the glaciolacustrine sand and gravel beach ridge to the west. The bedrock is primarily folded shales of Ordovician and Cambrian periods. The glacial till deposits are generally thin on north-south oriented ridge tops. The natural drainage of the area is north and south following the troughs made by the folds.

Topography The topography of the area next to the HRVT is generally rolling to undulating with moderate to steep hillsides. The rail bed and areas of developed trail are relatively flat to very gently sloping because of the requirements of the trains.

Soils The soils in this area are mostly of glacial till origin. Soils of the study area are classified by the Natural Resources Conservation Service (NRCS) as varying from deep to shallow and from poorly drained to well drained. The trail itself is primarily located on the former railroad foundation that consists of stone ballast referred to as a berm or prism.

Columbia County soils are not considered a limiting factor in development of the trail; where specific projects are concerned the soil types should be determined for that location. Where the trail is above grade the soil of the fill varies. Fill sections will exhibit characteristics inherent in the parent material used. These areas may need further investigation.

The former rail bed trail in Dutchess County traverses a section from Millerton to Under Mountain Road that is bordered by wetlands and associated soils. Specific assessments along this section may be required to assure that trail design takes into consideration these soil types.

Terrestrial and Aquatic Ecology

In general the ecology of the area adjacent to the HVRT is typical of the forests and agricultural open spaces of the Hudson Valley. The trail is built on a former railroad bed. The surrounding rolling hills, meadows and low-lying areas of this region have been farmed since the 1700's. The native ecosystems of the valley are returning as the railroad and farm fields are abandoned. The result is a patchwork of old and young forest and field mixed with active and former agricultural uses. This provides a variety of habitats for flora and fauna. The rolling, folded landforms also

create localized watersheds that provide habitat opportunities for an assortment of fish, amphibians, insects and reptiles.

The following descriptions present information on terrestrial and aquatic species of interest, listed by the trail section (sections 1 and 4 had no listings). (HVRTA, 2011)

Section 2

A Red Cedar Shrubland habitat characterized by eastern red cedar (*Juniperis virginiana*), a lack of tall trees, grey dogwood (*Cornus racemosa*), silky dogwood (*Cornus amomum*) and northern arrowwood (*Viburnum dentatum*), grasses and herbs and the olive hairstreak butterfly (*Callophrys gryneus gryneus*).

Sharon Station Beaver Pond is home to a variety of animals and plants including beaver (*Castor canadensis*), and is a source of the invasive purple loosestrife (*Lythrum salicaria*), common reed (*Phragmites australis*) and cattail (*Typha sp.*).

Cinder Flora represents a dry cinder (cinders from the rail bed) soil and vegetation such as little (*Schizachyrium sp.*) and big bluestem (*Andropogon gerardii*), lowbush blueberry (*Vaccinium angustifolium*) and scrub oak (*Quercus ilicifolia*).

Section 3

A rock cut with wet conditions supporting Herb Robert (*Geranium robertianum*) and marginal wood fern (*Dryopteris marginalis*).

A Floodplain – (off of the trail due to its sensitivity) is the Webatuck Creek floodplain with sycamore (*Platanus occidentalis*), eastern cottonwood (*Populus deltoides*) and silver maple (*Acer saccharinum*).

Section 5

The Under Mountain Road rock cut is an example of a “vertical wetland” includes several species of ferns, hazlenut (*Corylus americana*), skunk cabbage (*Symplocarpus foetidus*) and purple stemmed aster (*Symphotrichum puniceum*).

Section 6

Section 6 has not been opened nor assessed as of the writing of this document.

Rare and Endangered Species. One animal species listed as endangered in New York State and threatened on the federal list, and one species listed of special concern have been reported near the trail. Several rare plant species have been recorded near the trail.

Invasive Species. Invasive species, including purple loosestrife (*Lythrum salicaria*) and common reed (*Phragmites australis*), exist in wetland areas along the trail. In addition, an assessment of the section of the trail at Rudd Pond revealed several invasive plant species. They are Japanese barberry (*Berberis japonica*), Japanese honeysuckle (*Lonicera japonica*), multiflora rose (*Rosa multiflora*) and garlic mustard (*Alliaria petiolata*). (O’Brien, 2011)

Additional reconnaissance-level surveys are needed along the trail to identify invasives species, particularly in sensitive habitat areas. This information can then be used to prioritize control efforts.

Hydrology

The trail corridor includes many water resources including ponds, wetlands and streams. The following is a listing of the streams that the trail crosses with their DEC classification¹.

Table 2 Stream Crossings

Stream Name	Town/Village	Classification	Standard
Amenia Stream	Amenia	C	C (TS)
Webatuck Creek	Several Crossings in Town of Northeast and Village of Millerton	C C	C (T) C
Kilmer Brook	Northeast	C	C
Sawmill Brook	Northeast	C	C
Noster Kill	Northeast and Ancram	C	C (T)
Preechy Hollow Brook (tributary of Noster Kill)	Ancram	C	C (TS)
Bash Bish Brook	Copake	C	C (T)
Roeliff Jansen Kill	Copake	C	C (T)
Taghkanic Creek and tributaries	Copake/Hillsdale	C	C
Hollowville Creek	Claverack	C	C (T)
Agawamuck Creek	Claverack and Village of Philmont	C	C (T)
Kline Kill	Ghent	C	C

Except for the Roeliff Jansen Kill crossing in Copake, all stream crossings are in place or will use the stream crossings (culverts and/or bridges) of the former rail bed. It should also be noted that these streams vary as to classification and standard along their length. Streams that may be impacted by proposed trail work at a particular location should be evaluated at that location.

Extensive wetlands exist along several sections of the trail. These wetlands are described in Table 3. Trail Section 4 contains the most extensive wetlands. (Figure 4)

¹ Classification C - The best usage of Class C waters is fishing. These waters shall be suitable for fish, shellfish, and wildlife propagation and survival. The water quality shall be suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes. The symbol (T or TS) after any classification means that designated waters are trout waters (T) or suitable for trout spawning (TS).

Table 3 Wetlands Associated With the Trail

Section	Location	Wetland ID	Wetland Class ²	Wetland Size (Acres)	Comment ³
1	Amenia	AM-16	2	141	A
	Amenia	AM-7	2	34.4	A
	Amenia	AM-8	3	20.2	A
2	Amenia	AM-9	2	124.3	A
	Amenia	AM-11	2	45.4	A
	Amenia	AM-3	2	66.8	A
	Amenia	MT-35	2	66.3	A
	Northeast	MT-33	2	39.6	A
3	Northeast	MT-26	2	120.4	A
	Northeast	MT-22	1	172.3	A
4	Millerton	MT-10	1	33.4	B
	Millerton	MT-9	2	30.2	B
	Northeast	CO-27	1	650	B
	Northeast/Ancram	CO-26	2	231	B
	Ancram	CO-28	2	21	B
5	Ancram	CO-23	2	18.9	A
	Copake	CO-16	2	33.7	A
6	Hillsdale/Copake	H-19	1	357.5	C
	Claverack	H-12	2	22.9	C
	Claverack	H-11	3	11.9	C
	Claverack	CK-19	2	20.4	C
	Claverack	CK-20	2	40.9	C
	Claverack	CK-8	2	26	C
	Ghent	ST-43	2	30.5	C, D
	Ghent	CH-7	2	27.2	C, D
	Ghent	CH-6	2	19.7	C
	Ghent/Village of Chatham	CH-3	2	47.2	C, D

Several ponds are present on or near the trail right-of-way. In Section 2, near Sharon Station, a beaver pond/marsh-like wetland (part of wetland MT-35) is home to a variety of semi-aquatic animals and plants. Signs of beaver activity include well-worn grooves in the banks. Two invasive plants (purple loosestrife and common reed) and cattail dominate the shallow edges of the pond. The invasives have the potential to supplant other species. Other ponds in Sections 2 and 3 are farm ponds near the trail route but are maintained for agricultural purposes.

The wetlands in Section 4 have several ponds associated with them. Some of these ponds may be habitat for the bog turtle (*C. mühlenbergii*) that is listed as endangered in New York State and

² The Department of Environmental Conservation (NYSDEC) has classified regulated freshwater wetlands according to their respective functions, values and benefits. Wetlands may be class 1, 2, 3 or 4. Class 1 wetlands are the most valuable and subject to the most stringent standards.

³ Key to Comments. A = Existing trail is on upland exclusions, B = Section not completed, draft design plan in process, C = Property not acquired, wetland delineation may be needed, D = Trail may skirt edge of wetland checkzone, delineation probably needed.

threatened on the federal list. The ponds that support this turtle can change drastically due to invasive species such as common reed and purple loosestrife. Other ponds in this section are beaver ponds.

Ponds in Section 5 are agricultural ponds.

The first pond (going south to north) in Section 6 is near Orphan Farm Road. This is a former agricultural pond that is no longer in agricultural service. Ponds along the trail right-of-way in Hillsdale, Copake, Claverack, and Ghent are primarily associated with wetlands with a few small residential or agricultural ponds off the trail.

Considerations:

- Streams and ponds water quality protection
- Wetland protection and management
- Invasive species control
- Rare, threatened and endangered species protection
- Soil erosion and stormwater runoff control
- Rock cuts may be safety concern

Management Strategies

- Natural Heritage Program assessment and recommendations are needed over the entire trail.
- Delineate and flag wetlands before any design and construction is planned near wetland areas or wetland buffer zones.
- Inventory wetland flora and fauna on northern section of the trail. (Un-opened sections in Columbia County)
- Continue to work with the New York State Department of Environmental Conservation (DEC) regarding protection of existing rare, threatened, endangered and special concern species.
- Identify, monitor and control the spread of exotic and invasive species.
- Assess rock cut areas for safety.
- Assess and monitor trail use for impacts to the trail's natural resources. Should there be significant adverse impacts identified, operational and management actions will be taken to eliminate or reduce such impacts.
- Assess the bird species and bird habitats located in and along the trail corridor.
- Conduct site specific reviews for any development or ground disturbing activities other than on the rail bed itself.

Cultural Resources

Cultural resources include the built environment (buildings and other structures that may be historically significant) and archaeological resources.

The route of the Harlem Valley Rail Trail follows the rail bed of the abandoned Upper Harlem Line. The track was removed between Wassaic and Chatham by 1981. This route was a historic rail line serving both passengers and freight since the mid 1800's. Much of the physical cultural resources existing along the trail are a result of this historic use. A very complete description of the history of the railroad and towns along the way can be found at the Harlem Valley Rail Trail Association website (HVRTA, 2011).

The Harlem Valley area and the surrounding lands of the Hudson Valley have a rich cultural heritage apart from the rail line on which the trail is built. Primarily an agricultural area, Harlem Valley supported German and Dutch settlers beginning in the mid 1700's. Lumber was also an important resource. The advent of rail service also increased industry in the valley, where iron mills, lumber mills, and a variety of businesses thrived in the 1800's.

Built Environment

The architecture of the area is of importance in and of itself. Along the trail there are many structures that related to the railroad such as mills, iron works, train stations (depots), and inns. The following is a listing of National Register sites near or along the trail:

Coleman Station Historic District. This is the area around Coleman Station, Indian Lake, and Regan and Sheffield Hill Roads in Dutchess County. It contains several structures on the National Register including the Barrett and Oliver Houses on Reagan Road, Hiddenhurst on Sheffield Hill Road, and the Thomas N. Wheeler farm on Indian Lake Road.

Church of St. John in the Wilderness. This church is in the hamlet of Copake Falls, Columbia County.

Copake Iron Works Historic District. This site is in the Taconic State Park, Copake Falls area.

Taconic State Parkway. The section of the parkway in the East Chatham vicinity is near the trail corridor.

Blinn-Pulver Farmhouse. This structure is in the Village of Chatham on Hudson Avenue.

Historic Districts. The villages of Millerton, Wassaic and Hillsdale have developed historic districts that highlight the historic influence of the railroad. These districts take advantage of the trail's proximity and popularity to bring the history of the region to the trail users.

Archaeological Resources

Before the arrival of European settlers, this area was inhabited by a large population and variety of Native American nations. The Native Americans farmed, hunted, fished, built settlements and traveled extensively. Their interaction with the European colonialists is an important part of, and helped shape, Harlem Valley history. Artifacts documenting their activities and settlements are found throughout the area.

According to the New York State Historic Preservation Office's public GIS access web site the trail passes through several areas of archaeological concern. In Dutchess County the areas are near the village of Amenia and the Weatuck Creek area. In Columbia County the areas are near Weed Mine Road, close by in the hamlet of Copake Falls, west of Hillsdale in the hamlet of Craryville, and north of the hamlet of Ghent near Buckleyville.

Considering the trail is built on an abandoned railroad right-of-way, it is assumed that the ground under that trail has been significantly disturbed in the past. This disturbance includes grading and laying of ballast, tracks and ties.

Considerations

- Rail bed is already disturbed ground.
- Trail passes several archaeologically sensitive areas.
- Trail passes through or near structures and districts of historic value, some on the National Register of Historic Places.
- No complete inventory of existing and former railroad structures exists, including artifacts such as switches, mile markers, etc.
- Arch bridges and culverts may be National Register eligible.
- Trail is currently being considered for inclusion in the Hudson River Valley Greenway trail system.

Management Strategies

- Further investigation into cultural and historical resources is needed, especially that of the former railroad.
- Assess eligibility of arch bridges and culverts.
- Assess railroad artifacts.
- Connect railroad history and the trail with the Wassaic Project converting historic Maxon Mills grain elevator. (Wassaic Project, 2011)
- Existing structures pertaining to the railroad should be assessed for their historic significance. Any of these that are eligible for the National Register should be documented and nominated.
- An inventory of structures along the trail should be made and the structures assessed for significance and durability. (Such as stone culverts and bridges)
- The potential impact of future trail development on the archaeologically sensitive areas and National Register listings will be reviewed by the State Historic Preservation Office.
- A plan for interpretation of the trail's surroundings should be produced, including interpretive signage and brochures.
- Use county and town historical societies and historians as resources for interpretation of the history of the trail area.

Scenic Resources

Access to various scenic vista opportunities varies greatly along the length of the trail. This variability is due to two factors – elevation and vegetation. The elevation of the trail compared to the surrounding landscape depends on the original grade of the rail bed that was designed according to railroad specifications to maximize a flat or gently sloping grade. This means that for a significant portion of the trail, the trail elevation is below the surrounding grade level that

would offer a prominent long-distance vista. Where visible, the views from the trail include the Taconic Mountains to the east and Catskill Mountains far in the west.

The second limiting factor is surrounding vegetation. Scenic vistas are available where the trail goes through open fields, but where the trail goes through woodlands they are not.

The scenic resources along the trail directly relate to and are greatly influenced by the history of the area. The rolling hills are a patchwork of woodlands and open fields reflecting its agricultural history. This milieu of fields is an important scenic resource in itself. Additionally, where visible, vistas to the Taconic and Catskill Mountains are enhanced by this palette of landforms.

Near views of forests and open fields, rock cuts and stream crossings provide for interesting changes in the immediate scenery and microclimate of the trail when distant views are not available.

Nestled in this pastoral setting is a series of towns and villages settled in the mid 1700's to mid 1800's that grew because of the transportation of people and products along the rail line. These towns also are examples of the legacy of the valley history and their architecture adds to the interest, variety and beauty of the landscape. Views from the trail and its surrounding lands often include a church spire or other indication of these historic settlements. Adjacent farmlands and animals also provide near-ground views of interest.

Various groups have developed scenic easements which influence the trail route. Aside from OPRHP and CLC these include The Nature Conservancy, the Dutchess County Land Conservancy and potentially the Open Space Institute. The Town of Copake has also included the HVRT in its comprehensive plan in a scenic overlay. These efforts help to preserve the scenic viewshed of the trail and the area surrounding the trail.

Considerations

- The scenic resources and landscape qualities of the area the trail passes through need to be preserved.
- Villages along the trail route also add to the scenic and historic resources.
- There is little land under the control of OPRHP or other state agencies within the viewshed of the trail other than those sections in Taconic State Park.

Management Strategies

- Management activities should consider the preservation and protection of the trail's scenic qualities and protection of viewsheds.
- Identify and inventory existing landscapes of scenic value for the trail and initiate or continue activities that would promote preservation of those areas. Such activities might include:
 - scenic easements.
 - agreements with neighboring property owners.
 - protocols for landscaping activities on the trail.
 - acquisition of land in the viewshed from willing sellers.
- Work with partners (such as Columbia Land Conservancy) to acquire scenic easements.
- Work with local municipalities to coordinate efforts.

- Install interpretive signage where approaching villages with history connected with the trail route.
- Partner with local restoration groups and economic development initiatives to promote off trail historic and scenic resources.

Hunting

Existing Conditions

Hunting is not allowed on the trail. Licensed hunters may use the trail for access to hunting areas surrounding the trail. Weapons carried on the trail by hunters for this purpose must be open and unloaded.

Considerations

- Safety of trail users and hunters

Management Strategies

- Continue current policy on hunting in all open, closed, and newly opened trail sections.
- Continue working with DEC and sportsmen's clubs regarding hunting and trail use.

V. Infrastructure

Existing Conditions

Existing Structures

Culverts

There are numerous culverts in the unopened section of the trail in Columbia County. These culverts and their condition are detailed in the Barton & Logudice design report (B&L, 2006).

Several culverts on OPRHP property in the town of Ghent in the Arch Bridge Road area are non-functioning and will need to be assessed and repaired to cure current flooding problems. This area is located in Figure 6.

Bridges

The bridges on the trail route are railroad bridges that were built to carry the trains over roads, creeks, dales and other topographic barriers. An inventory of the bridges is found in the Barton & Logudice design report (B&L, 2006).

There are eight bridges on the unopened Columbia County section from Copake Falls to the Village of Chatham. Two of these bridges are stone arch bridges and are in need of assessment. The B&L report says that all these bridges need guiderails and some need new decks, abutments or new span members.

The railroad was still active when the Columbia County portion of the Taconic State Parkway was built. At that time a bridge was installed to carry the parkway over the railroad. Early in the 2000's the bridge was removed and the cut was filled. The parkway now passes over this fill section and effectively cuts off the continuous right of way of the trail. A similar condition exists nearby on Route 23 east of the parkway interchange.

Rail Bed

In all sections of the trail the rails and ties from the pre-existing railroad have been removed. In the open sections the bed has been re-worked to accommodate a multi-use trail. The open sections of the trail are at, below or only slightly above surrounding grade level.

In the new, unopened sections in Columbia County a portion of the trail is significantly higher than the surrounding grade level. Along this section, the original railroad embankment is overgrown with brush and tree saplings. The deep-rooted vegetation may compromise the stability of the side slopes of the berm.

In addition, two concerns exist at sites in the Town of Ghent (see Figure 6 for location). First, a culvert has failed and creates a drainage problem on surrounding property. Second, the side slope of a section of the rail bed embankment has slipped creating sink holes on the rail bed. These failures endanger the ability to construct the trail.

Water

Potable water is not provided on the open sections of the trail and is not intended to be provided in new sections at this time. Trail users carry their own drinking water. Bottled water can be purchased at retail locations in the villages and hamlets along the trail route.

Electricity

There is no electricity supply on the trail itself but access to such supply is available at points along the trail.

Sanitary

There are several spots along the open sections of the trail where portable toilets are available seasonally. These are pumped by commercial sanitary providers. No portable toilets or other sanitary facilities are provided in the winter months.

Considerations

- There are serious problems with some culverts in the Town of Ghent and require immediate repair to correct drainage and flooding problems.
 - Resources to correct the situation are not currently available to OPRHP region.
- No detailed survey of conditions of bridges and culverts north of Copake Falls exists.
- Bridges and culverts in need of assessment and possibly repair in unopened sections.
- Trail passes through several hamlets and villages.
- No availability of sanitary facilities on the trail in winter months.
- Slides of the sides of the railroad berm and sinkholes have occurred in the unopened section in Columbia County.
- Taconic State Parkway and NYS Route 23 fill sections cut off continuous, off-road trail right of way.

Management Strategy

- Explore partnerships with other agencies, the county and local municipalities to provide equipment and personnel to complete repairs on the culverts and bridge within the Town of Ghent.
- Complete an inventory of culverts and other drainage structures in the new sections of the trail. The inventory should contain information on the condition, age and location of the structures.
 - In addition to urgent needs in Town of Ghent, develop and implement a plan for repair or replacement and maintenance of all culverts and bridge structures.
- Assess railroad berm and vegetation covering it. If vegetation is a danger to the berm it should be removed.
- Conduct repairs to areas where the berm has collapsed.
- Provide portable toilets on the trail seasonally at some trailheads. Taconic State Park public restrooms will be available to trail users.
- Provide toilets, potable water and information at trailhead facilities and in the hamlets and villages along the route, i.e. Amenia, Millerton, Hillsdale, Ghent, Chatham
- Partner with DOT to consider installing culverts to carry trail under the Taconic State Parkway and NYS Route 23.

- Consider solar-powered composting toilets for permanent sanitary facilities at some remote trailheads, parking areas or trail/road intersections.

VI. Park Operation

Overview

When completed, the trail will be treated as one management area. Currently there are two de facto management situations, open and closed sections of the trail. The trail sections open to the public are either under management by Dutchess County or OPRHP. Some trail sections that are not open currently have no management structure. Sections of the trail under the jurisdiction of OPRHP are the management and maintenance responsibility of the agency.

In 1989 Dutchess County leased 18 miles of the trail route from OPRHP. This included portions of the trail in the Towns of Amenia and North East and the Village of Millerton. The purpose of this lease was to develop, maintain and operate the portion of the Harlem Valley Rail Trail that passed through these municipalities. Since that time, several sections of the trail are open and being operated by the County. At the same time, OPRHP developed a portion of the trail in Columbia County which is managed by Taconic State Park.

In 2006, after Dutchess County obtained a transportation grant from the Federal Highway Administration, OPRHP, Dutchess County and Columbia County entered into an agreement that specified the responsibilities of the parties for designing and managing the trail. The agreement also set forth agreements on the division of financial responsibility among the parties.

The agreement sets forth the following:

Dutchess County

- Design and manage the trail within Dutchess County as per its 1989 lease agreement with OPRHP.
- Design and manage the trail in Dutchess and Columbia Counties from Route 44 in Millerton to Under Mountain Road in the Town of Ancram where the OPRHP section of the trail begins.

Columbia County

- Pay a maximum of \$500,000 towards the cost of design, construction and supervision of the HVRT. Of this sum 80% to be paid through federal or state funds and 20% from local funds.
- Actual payment from Columbia County would not exceed \$100,000 (20% of \$500,000).
- The agreement states no management or maintenance responsibility for Columbia County.

Access and Fees

There is no fee for trail use.

The trail can be accessed by the public for non-motorized trail use. The main points of entry for the open sections of the trail are at the parking areas and trailheads located at several points along the trail route. From south to north these are: (Figure 3)

- Train station parking lot in Wassaic
- Mechanic Street and Town Hall in Amenia
- Coleman Station
- Trail office in Millerton
- Under Mountain Road
- Valley View Road
- Taconic State Park in Copake Falls

Staffing and Maintenance

There is no park manager or park staff for the open sections of the trail outside of Taconic State Park. The maintenance of these sections is shared, by agreement, between Dutchess County, the Town of Amenia, the Village of Millerton and the HVRTA. The HVRTA manages the trail in these areas providing volunteers who observe trail conditions and assist trail users with directions, hospitality, maintenance, environmental education, promotion and more.

OPRHP staff from Taconic State Park operate the trail section from Copake Falls to Under Mountain Road.

Partnerships

Partnerships are essential to maintenance, management, development and construction of the HVRT.

Dutchess County – The County leases the portion of the trail right-of-way in Dutchess County from OPRHP. In addition the lease and subsequent agreements outline responsibilities of both parties for aspects of management and maintenance. Dutchess County has also been instrumental in designing and constructing the trail sections that are now open and is moving ahead with the last phase of construction in the county.

Harlem Valley Rail Trail Association (HVRTA) - HVRTA is a nonprofit 501(c)(3). HVRTA's mission is to be an active volunteer organization dedicated to supporting the use, maintenance, growth and completion of the Harlem Valley Rail Trail. HVRTA has an agreement with Dutchess County, the Village of Millerton and the Towns of Amenia and Northeast to provide management and volunteer services to the trail. In 2009 HVRTA gifted 14 miles of rail bed in Columbia County to OPRHP and continues to aid in the future development of the trail.

Town of Hillsdale – The Town has an agreement with OPRHP to operate a town park on state owned land in the Town of Copake. The park is managed and maintained by the Town of Hillsdale which is also planning to expand facilities at the park through a separate planning process. A trail may connect the town park to the HVRT.

Columbia Land Conservancy (CLC) – The Columbia Land Conservancy (CLC) is a member-supported, nonprofit 501(c)(3) land trust. OPRHP is working in partnership with CLC to develop

the trail in Columbia County. In support of this effort, CLC, in conjunction with HVRTA, has received a planning and design grant from OPRHP for \$121,965. The grant, which requires a \$40,655 matching contribution from the local communities, will fund the design and construction plans for an additional five-mile section of the trail from the current terminus in Copake Falls through the hamlet of Hillsdale.

Copake Hillsdale Rail Trail Alliance (CHRTA) – CHRTA is a new organization formed by residents of the two towns to raise funds for the extension of the trail to the hamlet of Hillsdale. CHRTA is working in conjunction with HVRTA and CLC to raise the \$40,655 local match for the OPRHP design grant.

New York State Department of Environmental Conservation (DEC) and Department of Transportation (DOT) – OPRHP is working to coordinate the regulatory and planning efforts of the three agencies in order to move the trail development ahead.

Considerations

- 46 miles of trail to manage and maintain.
- Currently no OPRHP staffing.
- Historical agreements for leasing, managing and maintaining.
- Part of the trail is in Taconic State Park and may have different management policies.
- Volunteers have worked on the trail in operations, management, and maintenance.
- New sections of trail have no written agreements but there is a committed group of stakeholders, some of whom have worked on the trail in Dutchess County for many years.
- Trail can be economic engine.

Management Strategy

- Provide state side individual to coordinate trail development, maintenance and operations.
- Involve county and town governments in trail maintenance.
- Develop new trailheads and parking areas in new sections of the trail as they open in Dutchess (Phase IV) and Columbia Counties.
- Review and continue the lease agreement with Dutchess County when it is up for renewal.
- Review and continue agreements with non-profit partners for management and maintenance of open sections of the trail.
- Continue to oversee planning efforts of the Town of Hillsdale’s Steering Committee for the Roeliff Jansen Park and the agreement with the Town of Hillsdale to operate and manage the park.
- Coordinate trail planning efforts with DOT Region 8 Planning Department, especially where shared road segments or highway crossings are needed.

- Develop management and maintenance agreements with non profit organizations and municipalities on new sections of the trail in Columbia County as they are opened.
- Continue to coordinate trail operations with OPRHP Environmental Management Bureau (EMB) and DEC's Endangered Species Unit regarding the protection of rare, threatened, endangered and/or special concern species and their habitat.
- Involve county tourism organizations and Chambers of Commerce in marketing and promoting the trail and surrounding businesses that benefit from trail activities.

VII. Security Management Plan

The New York State Park Police-Taconic Region will have lead responsibility for ensuring the safety and security of the trail. The Park Police will patrol and respond to all requests for emergency service involving law enforcement, safety, and security matters.

Fencing

There are several areas along the length of the trail where the side slopes are steep and deep enough to make fencing recommended. In some areas the fencing already exists and has been in place for many years. Some of that fencing is now in a condition that warrants replacement. In other areas where the trail has been recently developed or will be developed in the future, new fencing will be required where safety is a factor.

Decisions on where to put safety fencing, and the design of that fencing, should be made according to the recommendations made by the American Association of State Highway and Transportation Officials (AASHTO) in their 1999 *Guide for the Development of Bicycle Facilities* (AASHTO, 1999).

Public Notification

The property will be posted as OPRHP property.

Signs to identify:

- Trail Rules and Regulations
- Maps identifying trail boundaries
- NYS Park Police with contact information as the 24-hour emergency contact point for the facility (for emergency service response: Police, Fire, and Ambulance).

Public notice will be given that the property is a State Park, with contact information (via: media, local posting, etc.).

Property Patrol

Uniform Patrols will be provided as part of a zone patrol concept.

Coordination with Other Agencies

State Park Police supervisory staff will meet with local law enforcement officials to coordinate matters of mutual concern.

State Park Operations and Police staff will confer with the local fire departments on matters of mutual concern.

State Park Operations and Police will meet with staff from the local ambulance service and emergency medical responders regarding EMS service to the facility.

Safety & Logistical Concerns

- The regional engineering staff and GIS unit in Albany will develop a set of quality maps of the trail.

- Regional operations will secure additional police personnel and equipment to properly patrol the area.

Considerations

- Multiple municipalities along the trail.
- Park police/state police availability.
- Coordination with local law enforcement.
- Limited cell phone service in some areas.

Management Strategy

- Develop coordinated plan with law enforcement agencies along the trail including Park Police, State Police, Town or Village Police, County Sherriff.
- Prepare a map for all emergency service agencies indicating access points for emergency vehicles.
- Identify and install call boxes at appropriate locations along the trail such as trail heads and emergency access points.
- Install signs indicating cell phone reception area.
- Install signs indicating cross street names.
- Suggest bicycle police patrols.
 - Possibly partners can provide bicycles for police
- Non profit partners can provide trained volunteers who act as trail “ambassadors” assisting trail users with directions, guidance in trail usage, etc. and can be in contact with local law enforcement or emergency services when needed.

VIII. Public Safety Management Plan

Signage

Currently there is no coordinated signage plan for the trail. Various signs have been installed in locations to give users information on trail usage, etiquette and wayfinding.

Signs will be placed in appropriate locations that identify the rules and regulations for items such as:

- Trail Hours of Operation
- Dogs must be on leash
- Barbecue/Picnicking
- Camping
- Motor vehicle restrictions
- Special Permits
- Hunting

These signs will be clearly positioned and directions clearly stated to alert the public as they enter and to help park police and staff maintain control at the facility.

Monuments indicating mileage will be erected on the trail.

Trail Section Names

At the discretion of the Commissioner of OPRHP, sections of the trail may be named after individuals or organizations that have helped develop the trail. These names may be suggested by trail partner organizations or individuals. Trail name information will be identified on a trail map and by signage on the trail. Signs must be approved by Taconic Region engineering department.

Trip/Fall Hazards

Periodic inspections will be conducted to identify and correct potential trip and fall hazards.

Considerations

- User conflicts.
- Vehicular control and road crossings.
- Design guidelines and sign standards. (Will also help with marketing and promotion of the trail by providing a cohesive identity and a sense of place.)

Management Strategy

- Develop and implement a comprehensive signage program following guidelines from AASHTO and OPRHP sign guidelines.(ORPHP, 2010) Signage to be installed will include (but not limited to):
 - Road crossings
 - Identification of the crossing road
 - Stop signs on the trail
 - Rumble strips in advance of the crossing

- AASHTO standards for trail-road intersections
 - Mile markers
 - Cell phone coverage sites
 - Solar powered call boxes
 - Trail etiquette
 - Speed limits
 - Motor vehicles prohibited
 - Trail head kiosks with trail maps, informative signage, historic and natural interpretation, and trail rules
 - Include OPRHP and partner logos where appropriate
- Trail inspected periodically for trip hazards such as roots, heaving pavement, holes and for unsafe trees and/or branches.
- Educate trail users about trail etiquette, speed limits, getting along with other users through trail head signs and brochures.
- Assess bollards at trail intersections for operation and safety; consider using half gates or other vehicular exclusion methods that are safer for trail users.
- Trail partner organizations can periodically inspect the trail and perform simple trail maintenance, (such as removing “face slappers”) or inform the government entity responsible for major work on that portion of the trail.

IX. Environmental Review and Future Planning

The State Environmental Quality Review Act (SEQR) requires that state and local agencies incorporate the consideration of environmental factors into their planning and decision-making. In general, activities that involve maintenance, rehabilitation, replacement in-kind, minor construction, minor temporary uses, health and safety improvements as well as mapping and information collection do not require further environmental review under SEQR. On the other hand, actions that are new or involve a significant change from existing conditions or uses are likely to require further environmental review under SEQR. The extent of environmental review needed can vary depending on the scope of the project and its expected impacts.

OPRHP considers IMGs to be exempt from further review under SEQR as they are essentially a documentation of existing conditions. The management strategies that are listed in Chapters 4, 5, 6 and 7 are consistent with the existing recreation use of this trail that has occurred formally or informally to date. Specifically, IMGs are deemed to fit within the following category within the SEQR regulations described as "routine or continuing agency administration and management, not including new programs or major reordering of priorities that may affect the environment" (617.5 c 20).

Future actions for the HVRT will range from minor rehabilitation projects on open sections of the trail that are needed to improve safety and accessibility, to major site work on unopened sections in order to construct a multi-use trail. As these projects are advanced, a determination will be made as to whether they will require review under SEQR. Additional review under SEQR requires the preparation of either an environmental assessment or an environmental impact statement (EIS). If potential adverse impacts are identified, further analysis will be required to avoid or mitigate those impacts. If these impacts are unavoidable and significant an EIS may be required.

Future planning decisions for the trail could also trigger the preparation of a master plan which requires the preparation of an EIS. Within a master plan, policies are identified; park use, natural, cultural and recreational resources are analyzed; alternative management strategies and development initiatives are evaluated; and a preferred alternative selected. A significant component of the master planning/EIS process is public participation.

Examples of projects that could be reviewed individually under SEQR without triggering the need for a master plan include the repair and rehabilitation of existing culverts or bridges, development of small ancillary parking facilities or trail surface improvements, e.g. paving.

Examples of future proposals that might trigger the preparation of a master plan include significant rerouting or elimination of portions of the trail, or proposals that may significantly impact the environment or affect the quality of recreation.

X. References

- AASHTO, 1999. American Association of State Highway and Transportation Officials. *Guide for the Development of Bicycle Facilities*. 1999.
- B&L, 2006. Barton and Logudice. *Design Report PIN 8756.44 Harlem Valley Rail Trail Project*. Prepared for New York State Office of Parks, Recreation and Historic Preservation. November, 2006.
- Berkshire Hiking, 2011. *Taconic Crest Trail-Vermont-Petersburgh, NY-Pittsfield, MA*. http://www.berkshirehiking.com/hikes/taconic_crest.html. Accessed September, 2011.
- CLC, 2011. Columbia Land Conservancy Web Site. *Harlem Valley Rail Trail/Columbia Land Conservancy*. <http://clctrust.org/community-assistance/harlem-valley-rail-trail/>. Accessed August, 2011.
- DCR, 2011. Massachusetts Department of Conservation and Recreation. *Ashuwillticook Rail Trail*. <http://www.mass.gov/dcr/parks/western/asrt.htm>. Accessed September, 2011.
- Dutchess County, 2011. Dutchess County, NY web site. *Dutchess County Online – The Official Web Site of Dutchess County, New York*. <http://www.co.dutchess.ny.us>. Accessed August, 2011.
- Hawthorne Valley Farm, 2011. Hawthorne Valley Farm Website. *Farmscape Ecology Program Home Page*. <http://www.hawthornevalleyfarm.org/fep/fep.htm>. Accessed August, 2011.
- HRVG, 2011. Hudson River Valley Greenway. *Hudson River Valley National Heritage Area*. <http://www.hudsongreenway.state.ny.us/Trailsandscenicbyways/TrailSystem.aspx>. Accessed September, 2011.
- HVRTA, 2011. Harlem Valley Rail Trail Association web site. *Harlem Valley Rail Trail – Dutchess and Columbia Counties – New York*. <http://www.hvrt.org>. Accessed August, 2011.
- OPRHP, 2010. Office of Parks, Recreation and Historic Preservation. *Trail Signage Guidelines for the NYS Park System*. Trails Technical Document #2. Available online <http://www.nysparks.state.ny.us/recreation/trails/technical-assistance.aspx>. Accessed September
- O'Brien, 2011. Robert O'Brien. Personal communication. Unpublished. June 29, 2011.
- PPS, 2010. Project for Public Space with Norman Mintz and Sarah Crowell. *A Design and Development Plan for Hillsdale Hamlet*. Prepared for the Town of Hillsdale. Available on line <http://www.scribd.com/doc/37454760/Final-Hillsdale-Report-08-06-10>. Accessed August, 2011. Online document dated August 6, 2010.
- Wassaic Project, 2011. Wassaic Project web site. *The Wassaic Project*. <http://www.wassaicproject.org>. Accessed August, 2011.