

DRAFT

**Dover Stone Church Public Conservation Area
*Management Plan***

Dover Plains, New York

Draft April 8, 2005

Prepared By:

**Dutchess Land Conservancy
2908 Route 44
Millbrook, New York, 12545**

For:

**Town of Dover
126 Duncan Hill Road
Dover Plains, New York, 12522**

**Friends of Dover Stone Church
P.O. Box 1
Dover Plains, New York, 12522**

Dover Stone Church Public Conservation Area
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Design and Management Plan
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Purpose and Organization

The purpose of this document is to develop a site plan design and establish management goals for the Dover Stone Church Public Conservation Area. This plan will guide the management and improvement of the property over the next 5 – 10 years. To allow for flexibility and revision over time, this plan will be reviewed at least once every five years and updated as necessary.

I. PROPERTY DESCRIPTION AND SITE ANALYSIS

Background

The Town of Dover, the Friends of Dover Stone Church, and Dutchess Land Conservancy, partnered to raise the funding to acquire and preserve the 58-acre Dover Stone Church Property. The Town completed the purchase of the Property in September 2004 after a conservation easement had been acquired by Dutchess Land Conservancy.

Setting

The Dover Stone Church Property is located within walking distance of downtown Dover Plains. There is an existing legal right of way over Stone Church Lane which served as the historic carriage and pedestrian access for visitors from New York City in the 1800's. The walk from the village takes less than five minutes. The Property provides a pedestrian link between the historic Tabor-Wing House (currently serving as the library and listed on the National Register of Historic Places), as well as other historic places within the Village of Dover Plains.

Attracting tourists to an area is one way to help revitalize downtown business districts and main streets. The Friends of Dover Stone Church will work with the Harlem Valley Partnership, the Dover-Wingdale Chamber of Commerce, and the Dutchess County Tourism Agency to promote the site as an asset to residential and economic development and regional tourism.

Dover Stone Church is also easily accessible from the Dover Plains LOOP bus stop and the Dover Metro North railroad station, making it a convenient destination for other Dutchess County residents as well as visitors from the metropolitan New York area. It is also located two train stops from the Harlem Valley Rail Trail (located at the Wassaic Metro North stop) another popular recreation site. The Dover Stone Church Property will provide free, public access for hundreds of metropolitan New York residents to experience and appreciate this local natural wonder as well as sitting, bird watching, fishing, picnicking, hiking, and passive recreational opportunities.

Property Description

The Dover Stone Church is a unique geological formation of metamorphic rock located on the Stone Church Brook. The brook descends a total of 150 feet over a length of 600 feet,

disappearing into a subterranean cave, and then reappearing in a natural cavern formed by the force of this stream. The property is located on the southwest slope of West Mountain just west of the Village of Dover Plains.

The term "Stone Church" is a geological term that refers to a willow cave created by a stream that drops into a fissure in bedrock and erodes a wide door-like opening. The "church" itself is formed by a fissure in rock through which the Stone Church Brook flows forming a number of ledges and waterfalls descending into a pool below. The outlet of the stream is through a stately arch forming the cathedral like entrance to the cave. Below this dramatic entrance, the brook descends through a moist fern-filled ravine into an open meadow.

Environmental Elements

Besides the remarkable Stone Church cavern described above, the property consists of 58.5 acres that is mostly forested with some open meadows.

Woodland Habitat

Approximately 52 acres of the Property are woodland that are part of a relatively unbroken tract of contiguous forest that extends for hundreds of acres beyond the property boundaries and represents valuable habitat. The Property is located within the West Mountain corridor, listed among the 33 original Significant Areas designated by Dutchess County and the Dutchess County Environmental Management Council in 1983. As noted in the listing, "West Mountain provides habitat for fragile vegetation and contains a "unique geological formation, the Stone Church". A majority of the Property is covered by coniferous trees including hemlock with a mix of hardwoods along the eastern frontage on Cart Road.

Meadows

Approximately six and one-half acres of the Property are upland meadow/mowed grassland that can serve as habitat for ground nesting grassland-breeding birds if managed/mowed properly. A small mowed grass area located to the south east corner of the property along Stone Church brook contains three small ponds.

Water Resources

The Property is in the watershed of the Stone Church Brook, a riparian corridor and tributary of the Tenmile River and the Housatonic River. More than 4,000 linear feet of the Stone Church Brook run through the Property. Stone Church Brook has been classified as a class C(T) stream by the New York State Department of Environmental Conservation according to potential use for fish propagation, fishing and trout. New York State works constantly to meet the Federal Clean Water Act of "fishable, swimmable" quality water and to encourage continuous protection to keep streams clean for the future. At the lower end of Stone Church Brook, there are a series of three small interconnected ponds. A great blue heron has visited the site upon occasion, feeding from these three ponds, once stocked with Koi fish.

Approximately 25 acres of the Property overlie a Zone II aquifer that replenishes the Town's aquifer recharge area, which serves as the sole source of drinking water for the Village of Dover Plains.

Elevation and Topography

The Property rises up over 330 feet in elevation to a high knoll at an elevation of 750 feet. The Stone Church itself is at about 450 feet with a gradual slope downward to the east towards the three small ponds. Steeply sloping areas (25% +) exist within the Stone Church ravine and in the central portion of the property to the west of the upper meadows towards the hill crest. A smaller area of steep slopes exists to the west side of the Property near the Stone Church Brook.

Plant and Animal Habitat

Although an intensive investigation has not yet been undertaken, Dr. Erik Kiviat, Executive Director, Hudsonia Ltd. & Professor of Environmental Studies visited the site on September 29, 2003. He described the area surrounding the Stone Church cavern as a cool moist ravine habitat with steep, high, rocky walls and a perennial stream at the ravine bottom. The ravine walls are forested with a mix of hardwoods and conifers. Cool ravines support plants and animals commonly associated with more northern habitats. Bryophyte cover (mosses and liverworts) and ferns are extensive on site with dozens of species observed. Dr. Kiviat recommended a more intensive study of these particular plants.

Mountain maple, Red-berried elder, and American yew - a species of conservation concern (rare and uncommon) were observed. Dr. Kiviat also noted the potential occurrence of Mountain spleenwort (species of special concern/State list - to be further identified) on the upper ridges of the ravine.

Although the cave itself is unlikely to support hibernating bat habitat, there is a possibility that Eastern pipistrelle (regional list/species of conservation concern) or Small-footed bat (state list/species of conservation concern) use this type of cave for roosting. Bats forage in a variety of habitats, especially forest edges and open areas and appear most common around wooded riparian areas which are believed to be the most important foraging habitat for many bats. Dr. Kiviat also noted that further study would have to be taken to determine the possibility of rare invertebrates

Cultural History

The popularity of Dover Stone Church dates back to the 1830's and lasted well into the 1900's when thousands of visitors each year would travel from New York City to see this natural phenomenon. The Dover Stone Church was also the subject of a Master Drawing of the Hudson River School of art, depicted in 1847 by Asher B. Durand and was a subject of a book by Benson Lossing, a Dutchess County historian entitled "The Dover Stone Church."

The first known reference to Dover Stone Church dates back to the 1600's, when legend states that Pequot Indian Chief Sassacus and his warriors hid in the cave to escape capture and death by the English Army.

Public Support

The Town of Dover has had several Town Board meetings to discuss the acquisition of the Stone Church Property. Friends of Dover Stone Church, Dutchess Land Conservancy, and the Town have held numerous meetings and site visits to garner support for the project including visits by Dutchess County Executive Bill Steinhaus, County Legislative Chairman Brad Kendall, DC

Commissioner of Planning Roger Akeley, Town and Planning Board members, town historian, residents, students, The Nature Conservancy staff, the Trust for Public Land staff, DLC Board members, and other interested parties.

Improvements

The Friends group plans to help the Town with the management of the Property, development of a visitor's guide, and conducting seasonal tours and education programs for residents, children, and visitors alike. Proposed improvements are limited to pedestrian trails, signage, benches (natural stones, logs preferred), an informational kiosk, and a foot-bridge to cross Stone Church Brook. A conservation easement held by Dutchess Land Conservancy ensures the future protection of the land and limits its future use to passive recreation, historic preservation and education.

II. COMPREHENSIVE SITE DESIGN

Overall Design and Interpretive Content

The dramatic geological character of Stone Church gives distinction to this public conservation area. The cultural history of this property as well as the proximity to the Village of Dover Plains provide strong background to guide the design and interpretive program for this public conservation area.

Proposed Uses

The Town of Dover's acquisition of the Dover Stone Church property will offer residents and visitors the opportunity to visit, learn, and enjoy an incomparable natural and historical landmark. The Property has been in private ownership for a number of years, most recently privately owned and maintained by the prior owner from 1988-2004. The Town plans to use the Property as a public preserve/conservation area and allow for limited passive recreation such as walking on woodland trails, fishing in the small ponds and Stone Church Brook, picnicking in the woodlands, near the ponds, in the upper meadows, and at the top of the hill, bird watching, and enjoying spectacular views of the Stone Church as well as the long distance views off site to the east. In addition, the property will be used to provide educational programs throughout the year for area schools, youth groups, after-school programs, and the general public educating them about the history, cultural, natural and ecological resources of this special property.

Access to the Property

Access for visitors will be from the Village of Dover Plains through the historical and traditional right-of-way (ROW).

Parking

Expectations are that most traffic will take place on weekends when parking is more available. Parking on site (e.g. on Dover Stone Church property) will not be provided. Appropriate parking areas will be established within the Village of Dover Plains at the following locations:

- Dover Elementary/Middle School/Tabor Wing House (when not in session e.g. weekends, holidays and summer).
- J.H. Ketcham Fire House, to the rear of the existing parking lot *pending approval*

- Stage Deli's large parking area (likely benefit from visitors' business) *pending approval*.
- ETC building if Town owned *pending approval*.

Pedestrian Access

Pedestrian access will be along a walking path located along the deeded right-of-way from the Village to the edge of the" Stone Church property.

- There are two neighboring landowners whose lands are subject to the ROW easement. The Friends and the Town of Dover will be working with these landowners to establish and define access to the Property from Route 22. A walking path will be created along the ROW.

Maintenance and Emergency Vehicle Access

Maintenance and emergency vehicle access will be provided at the access road/gate off of Cart Road with access along the existing farm road. An emergency gate will also be provided along the ROW entrance.

Signage

The pedestrian access will be clearly marked from approved parking areas to the public access point on Route 22 and along the right-of-way path to the entrance gate at the edge of the Stone Church Property, as well as along trails on the Property.

Appropriate signage with a consistent recognizable design/logo will be placed:

- to designate permitted parking areas;
- to direct visitors along Route 22 towards the entrance to the ROW;
- along the ROW to the Property;
- along all trails/paths on the Property;
- to indicate that the area is patrolled by the Dutchess Sheriff's Department or other authorized patrol (*pending approval*.)

Entrance/Gate

An entrance gate will be constructed and located at the entrance to the Stone Church Property where the ROW intersects the Property boundary. The gate will invite pedestrian entrance but prohibit vehicular/bicycle/ATV access. A side gate (*with a padlock pending insurance review*) will be installed near the entrance gate to allow for emergency ATV or other emergency vehicle access. A locked gate will also be provided at the Cart Road entrance for maintenance and emergency vehicles only.

Informational Kiosk and Signage

An informational kiosk will be located near the entrance gate (or near Main Street entrance?) in a site that is immediately visible upon entrance to the Property. The kiosk will be wooden of a rustic design. Signage on the kiosk will credit the funders, owners, and stewards of the Stone Church. Visitors will also be reminded to carry in/carry out items and to respect the sensitive nature of the site, as well as other rules, such as no trespassing on neighboring private properties, no climbing, stay on trails, etc.) A site map will show the location of the Stone Church, picnic areas, fishing points, and trails.

Property Boundaries

All property boundaries will be clearly marked with signs to prevent visitors from trespassing onto neighboring private properties. Additional fencing may be installed if needed along the property boundaries. Adjacent property owners will be made aware of efforts and intent to prevent trespass onto private property; request will be made for input on need and/or desire for additional boundary line fencing in appropriate locations.

Bridge

A wooden pedestrian bridge (which also allows for a lawn mower/riding tractor/wheelchair access) will be constructed across the Stone Church Brook to the east of the existing fjord.

Circulation and Trail Design

The layout of the trails will take the visitor through a dramatic progression through the various and distinct areas of the property. There will be a trail from the lower meadow/pond area to the Stone Church which will need to be improved slightly. There is a trail along the existing farm road to the upper meadow and then along the upper side of the ravine to the upper waterfall. This trail currently exists but is in need of improvement before it can be used by the general public. A spur will lead upwards off of this trail and connect to the high knoll area as well as to some additional points along the Stone Church Brook to provide fishing access. A loop trail ending back at the northern end of the upper meadows is anticipated. (*See map.*)

General Design

The furnishings on site will be constructed of wood and of a rustic design. The kiosk design will be of sufficient size (but not overwhelming) to provide information to visitors about the sensitive nature of the site and its features.

The design of the site furnishings including the picnic benches, kiosks and signs will refer to the main landscape feature – the Stone Church, and its rich history. The use of water worn stones for benches or stones that are softly bowed out will remind visitors of how natural processes have created this landscape.

Key Design Criteria

- Locate picnic areas and trails in a way that maximizes the educational and recreational experience while minimizing the impact on sensitive areas and habitats.
- Site picnic areas and trails to minimize conflict with adjoining property owners. The trail system and adjoining property edges will be clearly marked so that visitors do not intentionally or unintentionally wander onto adjoining private lands.
- Route trails to accommodate emergency vehicular access (ATVs).
- Create a trail system that avoids steep slopes and rocky edges.
- Create a clearly marked trail system from the village center to the site with allowed parking areas properly signed.
- Create an entrance to the Stone Church property that is appropriate to the site, has a sign/kiosk that includes information as noted in kiosk/signage area.

III. LAND MANAGEMENT

Trails within the Property:

All Trails:

- Maintain trails in a safe condition with a minimum 6.5' wide by 7' high corridor free of obstruction.
- Remove vegetation obstruction along trails.
- Weed whack woodland trails as needed during growing season.
- Install culverts, water bars and gravel at the designated stream crossings to prevent erosion and trail damage.
- All trails will be clearly marked.
- Route trails to accommodate emergency vehicular access (ATV).
- Create a trail system that avoids steep slopes and rocky edges (e.g. trails located next to exiting rock outcrops rather than over them.)

Specific Existing and New Trails:

Trials will be improved/extended/and created based on a phased plan.

- **Phase I:** All existing trails will be improved to allow visitor access, keeping in mind that these trails will remain natural based (not paved) and as close to the existing nature of the trails as possible
 - Improve the existing trail from the lower meadow/pond area to the Stone Church and add sign at entrance to trail
 - Mark trail along the existing farm road to the upper meadow.
 - Improve and then mark trail from the upper meadow to the upper waterfall (currently existing but needing improvement before being used by the general public.)
- **Phase II:** A plan for routing new trails will be developed (with assistance from a professional trail planner if funding allows). New trails will connect the existing upper trail to the high knoll area as well as to specific fishing access points along the Stone Church Brook will be provided. Ending the trail back at the northern end of the upper meadow will create a nice loop for visitors to walk.
- **Phase III:** New trails will be constructed as time and funding allows. Trails will have natural footing and shall not be paved.

Lower Meadow/Picnic Area

Manage lower meadow (near 3 ponds) for passive use, picnicking, fishing and education.

- Mow existing grass areas around the existing ponds during the late spring/summer/early fall to maintain existing lawn area.
- Prune branches only as needed for safety reasons for visual and physical clearance.
- Add benches using natural items (stones, logs, etc.) as seating.

Upper Meadows

Manage upper meadow for habitat and passive use only such as hiking, bird watching and education.

- Mow existing fields in conjunction with schedule (e.g. twice a year to clear invasive species but avoid disturbance of nesting birds – schedule to be determined.)
- Prune branches as needed for visual and physical clearance.

Ongoing Management Objectives

The Friends of Dover Stone Church (Friends) will be involved in upkeep and maintenance. They will establish a network of volunteers who will be responsible for monitoring the property on a regular basis for security and safety purposes.

The Friends will also create a working group of community friends to assist with trail monitoring, project implementation and programming (the Friends of Dover Stone Church and/or a subcommittee of the Friends) This working group will include volunteers to help in trail building/clearing, monitoring, and general upkeep. Dover high school students who must have community work credits and boy and girl scouts might be interested in helping with specific projects. Representatives from the Friends or other organized sub-committee will:

- Walk the trails on an average of twice per month. Train and coordinate volunteer trail monitors.
- Keep a trail log of visitors and work needed.
- Maintain a record of user comments and sign-ins on a monthly basis.
- Walk property boundary a minimum of once a year, prior to hunting season. Post boundaries as needed.
- Maintain and update information kiosks seasonally.
- Maintain or replace trees around the entrance and kiosk area to provide shade and visual transition into larger Conservation Area.
- Ensure safe access to the Property from the Village of Dover Plains. Year round access is of concern. Recommend a winter advisory on the kiosk as the site can be quite icy; closure if too dangerous.
- Plant native trees/shrubs along the R.O.W. access trail
- Consider hiring a knowledgeable local person to check the Property daily for a very minimal fee (e.g. someone who lives close by and is a frequent visitor).

Four-wheelers/ATV's are typical frequent visitors in town parks. The Dutchess County Sheriff's Department has an ATV Unit and will patrol areas upon request. Although warning notices of this may have a deterrent affect the Town and the Friends will engage Sheriff patrol for the Property.

Overall Management Goals

- Protect the diverse natural resources and wildlife habitat of the Dover Stone Church Conservation Area.
- Provide public access to view the Stone Church and its various habitats and features.
- Provide trails and places for appropriate passive recreation including picnicking, walking and fishing.
- Foster a land stewardship and water stewardship ethic by providing locations for environmental education programs for the citizens of Dutchess County, particularly school age children.
- Protect the rare plants and biological communities that occur on the property.

Natural Areas Management Objectives

Streams and Stream Corridors

Protect riparian corridor plants from sedimentation and erosion.

Immediate Objectives

- Keep human activity (trails, fishing and sitting areas) away from erosion-prone slopes and stream edges.
- Maintain woody vegetative buffers along streams and creeks.
- Protect intermittent streams and steep woodland slopes from erosion by keeping the public on the trails and using footbridges at crossings. Provide signage that asks visitors to stay on trails.
- Provide specific areas for fishing access to the brook.

Long Range Objectives

- Inventory rare fauna and flora populations and update data periodically.
- Ensure the sensitive nature of the site is not disturbed.
- The Dutchess County Waterman Bird Club is being contacted to identify bird species at the Church.
- Hudsonia is preparing a Biological Inventory of the Property including a habitat map showing vernal pools, rare plant survey, amphibian survey, etc. Incorporate this data into management plan revisions in the future.

Woodland Management Zone

Manage the Stone Church ravine and the woodland to promote a diversity of wildlife habitats.

- Control any over dominant and nuisance species.
- Try to leave snags (dead trees) standing in the forest if they are not dangerous, not obstructing trails or not within falling distance of trails.
- Maintain as a woodland. Remove only those trees necessary for safety, ecological management, and limited viewshed and recreational improvements from trails. Create small framed views of streams and falls from picnic areas by cutting branches and small trees.

Lower Meadow/Entrance/Picnic Area Management

Manage lower meadow/picnic and entrance area for passive use, picnicking, fishing and education.

- Mow existing grass areas around the existing ponds.
- Prune branches as needed for visual and physical clearance.
- Locate kiosk structures near entrance gate (or near main street entrance?) so that kiosk will be clearly seen upon entrance to the property.

Protect and improve habitat.

- Seed bare areas with native meadow/grass mix suited for this location.

Upper Meadows/Picnic Area/Wildlife Management

Manage upper meadow/picnic area for passive use, picnicking, hiking, bird watching and education.

- Mow existing fields in conjunction with schedule to avoid disturbance of nesting birds. Consult Dutchess County Soil and Water, The Nature Conservancy, Hudsonia, Audubon or other experts for the proper mowing regime.
- Prune branches as needed for visual and physical clearance.

Protect and improve habitat.

- Seed bare areas with native meadow/grass mix suited for this location.

Constructed Features Management Objectives

Recreational Structures and Human Activity Areas

Maintain recreational structures.

- Evaluate the structural and aesthetic condition of recreational features annually.
- Repair any damage or vandalism in a timely manner.
- Add benches and other amenities as needed.

Define and maintain human activity areas in the Conservation Area.

- Monitor the Conservation Area for unauthorized motor vehicle activity on a regular basis.
- Limit motor vehicle access to emergency, maintenance, and special access for the physically challenged by creating vehicular barriers (e.g. at entrance to village and gates/fences in other areas.)
- Evaluate the impact of human recreational use of the property annually and modify if necessary.
- Relocate trails if human impact threatens the biological management goals of the Conservation Area. (i.e. erosion, disturbance of important habitat, or noise.)
- Keep the kiosk and picnic areas pruned, mowed and generally tidy.
- Control poison ivy along trails and around kiosks, gazebo, picnic areas, and other public gathering areas.
- Remove dead or dangerous trees around activity areas and trails.
- Concentrate group trips (bird walks, school groups and picnics) around human activity areas during sensitive wildlife periods (nesting).

Maintain trails in a safe condition with a minimum 6.5' side by 7' high corridor free of obstruction.

- Remove vegetation obstruction along trails as soon as possible.
- Provide gates to control vehicular access to only emergency vehicles, maintenance vehicles and for special programs for the physically challenged.
- Weed whack woodland trails as needed during growing season.
- Create trail detours if necessary after damage by storms or high impact.
- Install culverts, water bars and gravel at the designated stream crossings to prevent erosion and trail damage.

Conservation Area Entrance Management Objectives

Monitor the property on a regular basis for security and safety purposes.

- Walk the trails on an average of twice per month. Train and coordinate volunteer trail monitors.

- Keep a trail log of visitors and work needed.
- Maintain a record of user comments and sign-ins on a monthly basis.
- Walk property boundary a minimum of once a year, prior to hunting season. Post boundaries as needed.
- Maintain and update information kiosks seasonally.
- Maintain or replace trees around the entrance and kiosk area to provide shade and visual transition into larger Conservation Area.
- Ensure safe and year round access to the Conservation Area from the Village of Dover Plains.
- Farm roads will be maintained with sand & gravel as necessary. Internal roadways will not be paved.

Conservation Area Interface Management Objectives

Work with the Village of Dover and neighboring owners (whose lands are subject to Stone Church right-of-way) to establish and define access to the Dover Stone Church Public Conservation Area from Route 22 (Main Street).

- Clearly mark and post the boundaries between this property and all adjacent properties.
- Communicate with the residents of Dover on how the educational programs and interpretive content of this Conservation Area connect to the goals of the Comprehensive Plan.
- Create a working group of community members or friends to assist with trail monitoring, project implementation and programming.

Process for Five-Year update

Approximately every five years, the Dutchess Land Conservancy will review the management of the Dover Stone Church Conservation Area and determine if this plan needs updating. If such an update is deemed necessary, the Conservancy will discuss the changes with the Town of Dover and the Friends of Dover Stone Church as they relate to the overall management goals as stated herein and the Conservation Easement held by DLC, with the understanding that new changes in management and improvements will be in accordance with these management goals. DLC will ground monitor the Property at least once a year to determine compliance with the Conservation Easement and to note any concerns and/or issues which will need to be addressed in the Management Plan update.