

# Conservation Advisory Council Town of Hillsdale, NY

David Lewis, Chair  
Amy Davidsen  
Mary King  
Gretchen Stevens

## MINUTES CAC MEETING, 20 FEBRUARY 2025

The meeting was convened at 7:00pm at the Town Hall. All CAC members were present. Jamie Carano Nordenstrom (Town Council liaison) was also present. Guests attending were George Schmitt (CPL Engineers) and Tom Carty (Hillsdale Town Council).

### Approval of Minutes

The January minutes had been previously amended and approved via email and sent to the Town Council and the Deputy Town Clerk.

### Old Business

#### **Wastewater Treatment Plant**

We sent a memo to the Town Council expressing the CAC's concern that the leachfields of the wastewater treatment plant are in the 500-year floodplain of the Roe Jan and Auction Creek. The town supervisor asked consulting engineer George Schmitt (CPL) to attend this meeting and discuss the situation with us. He described the wastewater treatment infrastructure at the WTP, the problems that have been discovered recently, proposed temporary solutions, the need for studies to determine the best permanent solutions, and the need for grant funding.

#### **Road Paving**

The CAC received a letter from Highway Superintendent Richard Briggs requesting comments on the potential environmental impacts of chip/seal treatment of Texas Hill Road, Appletree Lane, and Stone Hill Road. Gretchen had prepared a draft CAC memo in response, and Amy agreed to draft additional sections on maintenance and mitigation measures to reduce the impacts of unpaved roads.

#### **CAC Position**

David printed and posted the announcement about the CAC position opening at several locations around Hillsdale. We have received no applications to date. Mary mentioned someone who has expressed interest but has not submitted an application. Gretchen will send a note to them describing the position and how to apply.

## **Planning Board Meeting**

Amy and Gretchen reported on the February Planning Board meeting. The board reviewed the Gellert/Whippoorwill Rd subdivision proposal and the site plan of the Clott parcel on Syre Lane.

David and Gretchen had visited the Gellert site to ascertain the presence of a wetland and stream and their relationship to a proposed right-of-way along the southern border of the property. The right-of-way would provide vehicle access to the larger parcel from which this 7-acre parcel would be subdivided. They found a wetland and a small stream, and sketched the approximate boundaries of the wetland. (The wetland also appears on the state and federal wetland maps.) A roadway through the right-of-way would need to cross the wetland and stream. The CAC report to the board (attached) recommended that the wetland be formally delineated, surveyed, and mapped before the roadway is designed, and that the wetland and stream be bridged to minimize impacts. A neighbor informed the Planning Board that there is a gravestone in the proposed right-of-way. Phil Gellert agreed to realign the right-of-way to avoid the grave.

Amy, David, and Gretchen had visited the Clott site and the CAC submitted a report (attached) to the Planning Board describing the conservation issues posed by the proposed construction of a driveway, garage, house, and swimming pool on this site in the Ridgeline Overlay Zone. The board listened to a presentation by the applicant's consultant, but did not complete the Environmental Assessment Form, did not critique or discuss the applicant's conservation analysis, and did not discuss the conservation issues or mitigation measures before moving to approve the project.

The CAC is drafting a memo to the Planning Board 1) explaining the state and local requirements for conducting environmental reviews; 2) proposing the development of checklist for site plan review for use by the Planning Board and applicants; 3) requesting that Planning Board members all fulfill the annual training required by state law; and 4) requesting that members regularly review the local code so that they understand the Planning Board's responsibilities.

## **CAC Web Page**

The revised web page materials have been uploaded to the town website, but there are still problems so David will talk to Emily about how to correct them.

## **Comprehensive Plan**

Amy has sent a draft vision statement for the Comprehensive Plan for us to review. We will discuss it the March CAC meeting.

## **Water Testing**

David spoke to Christie Wright in Kinderhook about the well-water testing done by the New York Rural Water Association free-of-charge. David will call NYRWA to see if they can conduct the pilot well-testing program in Hillsdale.

David has not yet asked Robina if the water testing at the three town-owned facilities was done and invoiced in December. Jamie says that if the work was not completed and invoiced in 2024, the project must be re-approved by the Town Council for 2025. Funding for the 2025 project should not come from

the CAC's 2025 budget. David will also ask Robina for the water test results from the three municipal buildings.

### **Hazard Mitigation**

Last week the Hillsdale Hazard Mitigation Team (Mike Dvorchak, David, Gretchen) received a near-final draft of the Columbia County Hazard Mitigation Plan and submitted a few additional edits to the county's consultant. A revised draft will be ready on 28 February, and a public presentation (virtual) will be held in March. A 30-day public comment period ends in early April and the consultants hope to complete the final draft by the end of April.

### **County Conservation Plan.**

Gretchen and Jamie reported on the recent stakeholders meeting for the Columbia County Conservation Plan. They expressed concern that the process for developing the plan may not include allowance for meaningful contributions from the stakeholders, including the municipal representatives. Gretchen and Jamie will prepare a memo to the CLC about this concern.

### **New Business**

#### **Culverts**

As far as we know, there has been no work on replacing the highest priority culverts identified in the 2009 Hillsdale Groundwater Resources Study. Jamie believes that CHIPS (Consolidated Local Street and Highway Improvement Program) funding should be available for this work and that prioritizing the uses of those funds is up to the Town Council. The CAC should have a conversation with Richard about his views on when and how to replace the high priority culverts.

### **Adjournment**

The meeting was adjourned at approximately 10:15pm.

### **Action Items**

- David: -- Review the CAC memo to the Planning Board about the deficiencies of their site plan review.  
-- Talk to Emily about fixing the CAC webpage.  
-- Ask NYRWA if they can conduct our pilot well-water testing program.  
-- Ask Robina about the completion of the water testing at town buildings.
- Amy: -- Draft additional material for the CAC memo on paving the three roads.  
-- (carried over) Draft memo to Town Council requesting a 2026 budget line for the Comprehensive Plan update
- Mary: -- (carried over) Submit regular reports to the Town Board about EMC activities.

Gretchen: -- Send a note to Kathryn Levin about the open CAC position.  
-- Prepare a note to the CLC about stakeholder input to the Columbia Co Conservation Plan  
-- (carried over) Ask CLC and FEP for possible referrals for the CAC position.

Someone: --Talk to Richard Briggs about replacement of the priority culverts.

All: -- Review the draft vision statement for the Comprehensive Plan.  
-- (carried over) Obtain sign-in codes from David for the CAC calendar.

# Conservation Advisory Council Town of Hillsdale, NY

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## Gellert Parcel, Whippoorwill Road Report on Site Visit

6 February 2025

Phil Gellert has proposed to subdivide a ca. 7-acre parcel from a ca. 260-acre parcel that adjoins Whippoorwill Road and Sabeff Road. The new parcel would include a proposed right-of-way along its southern edge to provide access from Whippoorwill Road to the larger remaining parcel.

The 2025 NYSDEC Informational Freshwater Wetland Map shows a ca. 3-acre wetland in the forested part of the subdivision parcel. The mapped wetlands were delineated by NYSDEC remotely on the basis of aerial photo images and other map data. Very few have been visited on the ground, and all delineations are sketches only. Actual wetland boundaries must be determined by onsite observations of vegetation, soils, and evidence of wetland hydrology.

The NYSDEC Informational wetland map is intended to inform users of the general locations of wetlands but does not indicate their jurisdictional status. Unlike the previous NYS Freshwater Wetland Map, the Informational map depicts wetlands of all sizes, both regulated and unregulated. The map is intended for general planning purposes only. It does not show accurate wetland boundaries and omits many wetlands altogether.

The State of New York regulates activities only in wetlands of 12.4 acres and larger, except for a few smaller wetlands of “unusual local importance” that have been designated as such by NYSDEC. (In 2028 the state jurisdictional minimum will drop to 7.4 acres.) The federal government regulates activities in wetlands of any size as long as they meet certain criteria of connectivity to perennial streams.

Conservation Advisory Council (CAC) members David Lewis and Gretchen Stevens visited the site on 25 January 2025 to ascertain the presence and extent of wetlands and streams and, if present, their spatial relationship with the proposed right-of-way on the subdivision parcel.

The day was cool (20s °F) and the ground was covered with ca. four inches of snow. Winter conditions, when many plants are invisible and the ground is frozen and snow-covered, are not ideal for identifying and delineating wetlands. We observed enough plant and hydrological indicators,

however, to confidently identify a forested wetland bordering both sides of a stream. The dominant trees were red maple and green ash; wetland shrubs were silky dogwood and meadowsweet; and non-woody plants included sensitive fern, marsh fern, tall goldenrod, and eastern willow-herb. Parts of the wetland were ice-covered.

The stream running through the subdivision parcel emerges from a constructed pond on the adjacent parcel to the north and feeds a constructed pond on the adjacent parcel to the south, the outlet of which is a Class C stream that is a subtributary of the Roeliff Jansen Kill. The stream segment on the subdivision parcel was over one meter wide and several centimeters deep, partially ice-covered, and flowing swiftly on 25 January (see photos). We speculate that it flows intermittently during a year of normal precipitation and may dry up at certain times of year.

According to our sketched delineation, the wetland is approximately one acre, so would not be regulated by New York State under today's regulations. We believe it would be regulated by the federal government because of its downstream connection to perennial streams, but the jurisdictional determination would be made by the US Army Corps of Engineers, the agency that administers the federal wetland regulatory program.

Wetlands of all sizes play important roles in maintaining our water supplies, storing floodwaters, storing carbon, and supporting local and regional ecosystems. Some wetlands are sites of groundwater recharge, and most support plants, invertebrates, soil fungi, and microbes that take up, break down, and transform pollutants, and in that way cleanse the water that reaches streams, ponds, and groundwater, including the groundwater that feeds our drinking water wells. Wetland plants take up and use some of the nutrients that might otherwise disrupt the nutrient balance in downstream streams and ponds. Small and large wetlands are important contributors to biological diversity, supporting a huge array of wildlife and plant species, including those that live only in wetlands, and many more that use wetlands for certain parts of their life cycles. The cumulative losses and degradation of small streams and wetlands that have been occurring for centuries have had incalculable consequences for water supplies, the carbon balance, and ecosystems.

Figure 1 shows the stream and our approximate delineation of the wetland overlaid on the wetland as shown in the Informational Freshwater Wetland Map.

Any future development of this parcel should occur in the ca. 2-acre meadow which is entirely non-wetland. If the proposed right-of-way is to provide vehicle access to the large parcel, then a bridge would need to be constructed over the wetland and stream. An accurate wetland boundary in the vicinity of the right-of-way should be delineated and surveyed in the spring or summer to more accurately determine the area to be bridged. Any roadway construction that disrupts the wetland or stream would most immediately affect the two ponds that are just downstream on the neighboring property. Turbidity and released nutrients could also degrade the stream habitats below the ponds, including the trout spawning stream (classified C[TS]) that parallels Hunt Road.



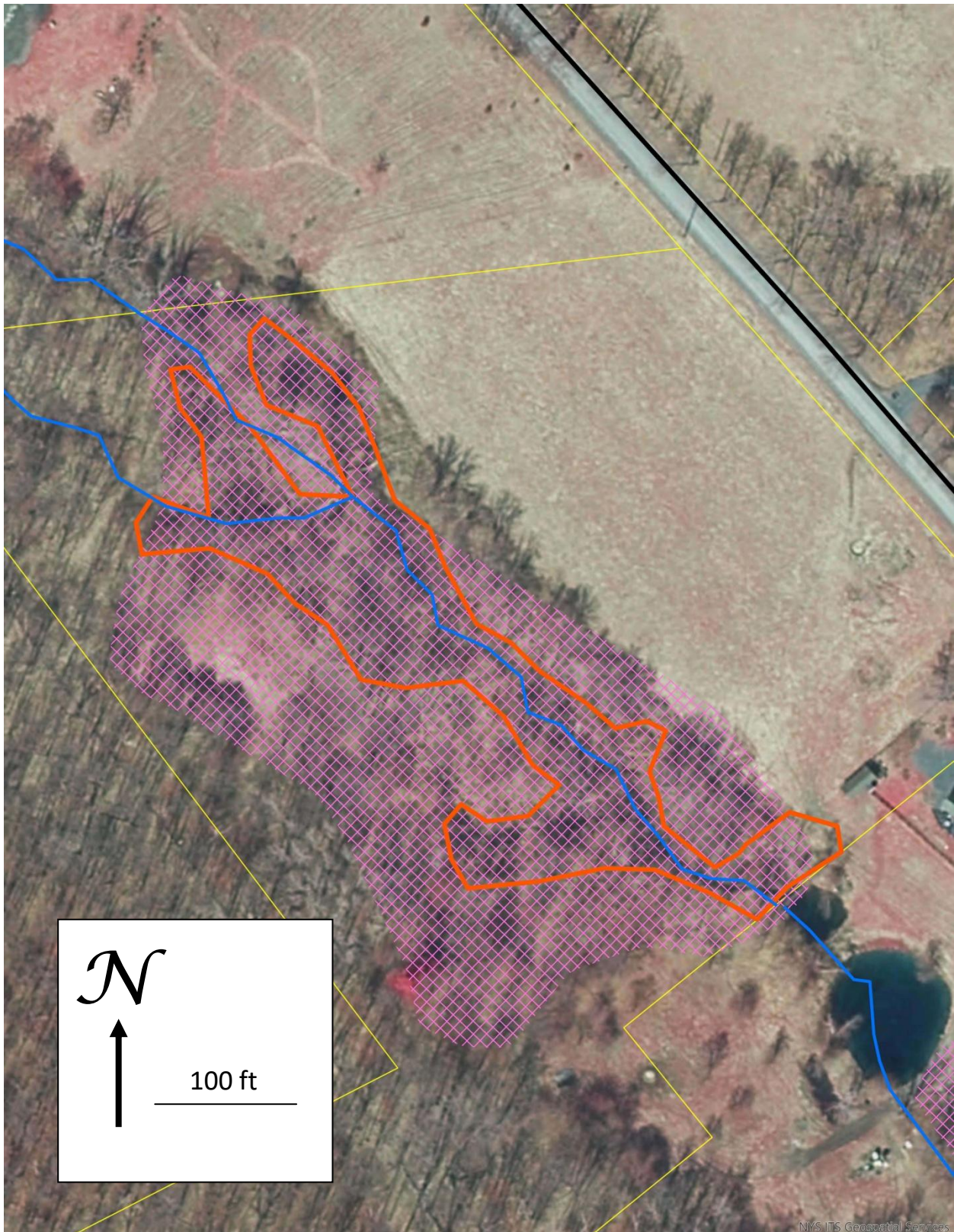
Frozen and unfrozen segments of the stream on the Gellert subdivision parcel, 25 January 2025.



Abundant fertile fronds of sensitive fern were a prominent mid-winter wetland indicator.



Wetland and stream in the proposed right-of-way, looking northeast along the southern boundary of the proposed subdivision parcel.



Wetland and stream on the Gellert parcel, Whipoorwill Rd. Pink hatching shows the extent of wetland in the 2025 NYSDEC Informational Freshwater Wetland Map. Orange outline is the approximate wetland boundary sketched by the Hillsdale CAC, based on a 25 January site visit. The actual wetland boundary in the vicinity of the proposed right-of-way should be delineated in spring or summer when soils are unfrozen and more vegetation is visible.



# Conservation Advisory Council Town of Hillsdale, NY

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## Clott Parcel, Syre Lane Review of Draft Site Plan

5 February 2025

### **Abstract**

The Conservation Advisory Council has reviewed a proposal submitted by Jani and Jeffrey Clott to build a house on a 21.4-acre parcel of forest and meadow in the Hillsdale Ridgeline Overlay Zone on Syre Lane. The site is located in the Taconic Mountains—a state-designated Significant Biodiversity Area and a geographic area widely recognized for its large forests, rare plants and animals, and its support of water resources for the region. The proposed project raises issues of forest fragmentation and the external (offsite) effects of developed areas, light pollution of nearby habitats and the scenic landscape, and breaking the continuity of the ridgetop tree line. The proposed house site is exposed to an immense viewshed including public roads, public parks, and other public access sites. The visual impacts of houses at high-elevation sites like this one were the impetus for passage of the 2007 Ridgeline Regulation which requires that site plan approval only be granted if the proposed development minimizes visibility from a public road and will not degrade the scenic character of the landscape. The CAC recommends moving the house site closer to Syre Lane and reducing the area of window glass. These changes will minimize the forest fragmentation, reduce the size of the viewshed, and reduce the light pollution reaching near and distant places, thus reducing the ecological and scenic impacts of the new house and meeting the intent of the Ridgeline Regulation. The *Conservation Analysis* does not discuss the ecological and scenic impacts of the proposed project, or any planned mitigation for those impacts.

### **Background**

Jani and Jeffrey Clott are proposing to build a driveway, house, garage, and pool on their 21.4-acre parcel on Syre Lane in Hillsdale. The parcel is on the summit of the Taconic Ridge, straddling the Roeliff Jansen Kill and the Green River watersheds; the driveway crosses the watershed divide. Elevations range from 1232 to 1438 ft above sea level. Because the parcel is in Hillsdale's Ridgeline Overlay Zone, the project is subject to special requirements and site plan review by the Planning Board.

We have seen the draft site plan documents for the Clott parcel prepared by Mowery Marsh Architects, dated 27 December 2024, and the *Conservation Analysis*, Short Environmental Assessment Form, Part 1, and Visual EAF Addendum prepared by Pat Prendergast and submitted to the Hillsdale Planning Board on 23 January 2025.

Conservation Advisory Council (CAC) members David Lewis, Amy Davidsen, and Gretchen Stevens visited the site on the morning of 25 January 2025 after certain development features had been staked and flagged by a surveyor. The ground was snow-covered, ca. 4 inches deep. The proposed driveway alignment is along an existing woods road through a hardwood forest on gently sloping to level land. (There is no evidence of the roadway on 2001 aerial photos, so it was probably built in 2003 to provide access for clearcutting the forest to create the meadow/viewway.) The proposed house/garage/pool site is on a gentle slope at the edge of the ca. 1.2-acre steeply sloping meadow, and the proposed leachfield area is flat or nearly so.

The meadow below the house site is in oldfield vegetation with plants such as goldenrods, asters, common yarrow, meadowsweet, multiflora rose, and grasses. At the lower end of the meadow are large piles of logs that appear to be remains of trees that were cut to create the meadow clearing 20+ years ago.

## ***Conservation Analysis***

At §245-31A(6)(b) of the Hillsdale code, the Ridgeline Regulation calls for a Conservation Analysis consisting of inventory maps, description of the land, and an analysis of the conservation value of various site features.

“...The Conservation Analysis shall normally show the following:

- [1] Wetlands, watercourses, slopes between 15% and 25%, and slopes over 25%;
- [2] Scenic viewsheds;
- [3] Buffer areas necessary for screening new development from adjoining parcels;
- [4] Stone walls and individual trees that are eighteen-inch-diameter at breast height (dbh) or larger;
- [5] Mapped areas of significant habitat based upon available mapping for biodiversity habitat values;
- [6] The location of all existing vegetation by general vegetation type as well as the identification of all vegetation proposed for thinning or clearing in connection with a development application, including identification of vegetation to remain after such thinning or clearing....

(c) Conservation Analysis shall describe the importance and the current and potential conservation value of all land on the site.... In the course of preapplication conferences and initial review, the reviewing board shall indicate to the applicant which of the lands identified as being of conservation value are most important to preserve.”

A *Conservation Analysis* was submitted to the Planning Board by consulting engineer Pat Prendergast on 23 January 2025. Of the items listed above, the *Conservation Analysis* has not included the following:

- a description of the land or an analysis of the conservation value of various site features;
- a map showing steep slopes
- a map showing the scenic viewshed
- trees of  $\geq 18$ " dbh (Drawing A1.01 shows selected trees by height but not by diameter at breast height. We do not know the selection criteria for the mapped trees.)
- a map of areas of significant habitat based upon available mapping
- locations of general vegetation types as well as the identification of all vegetation proposed for thinning or clearing

Mr. Prendergast states that the information for the *Conservation Analysis* was obtained from the online NYSDEC Environmental Resource Mapper and the Hillsdale *Natural Resource Inventory* (NRI). He found, correctly, that none of the environmental resource features displayed in the online Mapper pertain to the Clott site.

We caution the applicant and reviewers, however, about interpreting those data for this and for any other site. The NYSDEC and federal data for streams and wetlands is very incomplete. Many small streams and wetlands do not appear on state or federal maps (even the just-published NYSDEC 2025 “informational” wetland maps) despite the great ecological and water resource values of small streams and wetlands. Also, the NYSDEC data for rare plants and animals include only those species and locations that have been reported to the state. But most sites have never been surveyed for rare species, so no one knows the locations of all the other occurrences. The data displayed in the NYSDEC Environmental Resource Mapper, the Hudson Valley Natural Resource Mapper, and the EAF Mapper are good places to start for environmental information, but do not tell the whole story.

On the basis of our field observations and interpretation of the elevation contour data, the CAC agrees that there are no wetlands or streams on the Clott site, but cannot determine the presence or absence of rare species without a habitat assessment and/or rare species surveys. The forests of the Taconics are recognized for their importance for rare species, for migrating birds, and as habitats and travel corridors for other wildlife (Penhollow et al. 2006).

The maps in the Hillsdale *Natural Resource Inventory* use the same state and federal data as the Mappers mentioned above for rare species and for wetlands and streams, but the *NRI* cautions that “much of the mapped information is very general and incomplete and should not substitute for on-site evaluations and inventories of environmental features” (CP&EA 2020, p. 144).

Because rare species surveys can be time consuming and must be conducted by specialists during the seasons when the species of interest are most visible, and sometimes surveys must span several years, a good alternative is to simply conduct a habitat assessment and then, if the habitats for certain rare species are present, then design the new development project in ways that accommodate the needs of those species.

In the *Conservation Analysis*, some pieces of information said to be gathered from the Hillsdale NRI are incorrect; for example:

“*Project site does not have slopes of 25% or over*”

Approximately 1.4 acres of the Clott parcel is on slopes of 25+%, and most of the meadow is on slopes of 15+%. See Figure 4 of the Hillsdale NRI.

“*Watershed: site flows east toward Green River*”

Syre Lane and approximately ¼ of the parcel are in the Green River watershed, but the rest of the parcel including the proposed house site is in the Roe Jan watershed. See Figure 8 of the Hillsdale NRI.

“*Wildlife...*”

The CAC does not dispute the kinds of wildlife listed as “possible” or “present” in the *Conservation Analysis*, but cautions that the “present” list is very incomplete. The *Conservation*

*Analysis* should at least make it clear that the list is both speculative and incomplete and that no field surveys have been conducted.

*“Biodiversity Area – site is on eastern edge of area. Hardwood forest is noted.”*

We assume that this refers to the Taconic Mountains Significant Biodiversity Area. The Clott parcel is in the middle of the SBA, not at the eastern edge. See discussion below.

*“Steep slopes – no.”*

Approximately 1.4 acres of the parcel is on slopes of 25% or greater. Most of the meadow below the house site is on 15% slopes. The driveway and house site are not on steep slopes, however.

*“Forest and meadow conservation – it is recommended that each habitat be conserved. This project maintains both.”*

The project does not directly destroy forest or a large meadow area, but the ecological impacts on those habitats, on the Taconic Ridge in general, and on the scenic value of this hill could be significant, as explained below.

The *Conservation Analysis* uses the Hillsdale NRI maps to make a checklist of natural resource features, but provides no discussion of the implications of that information for site planning. For example, although the *Conservation Analysis* acknowledges that the parcel is in a Significant Biodiversity Area and a “regionally significant” large forest, it does not discuss the potential impacts of new development on those features. See the discussion below about the “edge effects” of development.

## **Environmental Assessment Form Part 1**

(The EAF was submitted to the Planning Board by Pat Prendergast with the *Conservation Analysis* on 23 January 2025.)

For completeness and accuracy, the answers to question 4 should add “Other: meadow/ oldfield” and to question 14 should add “early mid-successional.”

The appropriate answer to question 15 is “unknown.” Without field surveys by qualified biologists in appropriate seasons, no one can know if any threatened or endangered animals occur there. The site has not been surveyed for rare species or their habitats, so the absence of data in the state or federal records does not imply the absence of rare species on the site. The NYSDEC and the US Fish and Wildlife Service only have records of rare species locations that have been reported to them, but most sites, including the Clott parcel, have never been surveyed for rare species. On this topic, the [NYSDEC website](#) says:

“Not all of New York has been surveyed, so if no locations of endangered and threatened species are documented from the project site, it does not mean that none are there. It only means NY Natural Heritage has no information about the area. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other resources may be required to fully assess the presence of threatened or endangered animals.”

## Visual EAF Addendum

(The Visual EAF Addendum was submitted to the Planning Board by Pat Prendergast with the *Conservation Analysis* on 23 January 2025.)

Answers to questions 1-3 (about the visibility of the project site) seem fine. We do not understand question 4, so have no comment on the answers.

For question 5 (*Are there visually similar projects within:*), we believe that 1 mile, 2 miles, and 3 miles should all be checked “yes” because there are visible residences in the viewshed within all of those distances.

The answer to question 6 (*annual number of likely viewers of the proposed project*) is cut off and unreadable in the pdf, but appears to be a number less than 100. We do not know how to estimate such a number, but guess that the correct answer would be at least in the hundreds because of the large viewshed containing public roads and public-access areas.

For question 7, we believe that all activities and frequency choices should be checked, because roads, residences, recreational areas, and work sites are all within the viewshed of the house site, and would be used daily, weekly, weekends, and seasonally.

Although the Visual EAF notes the extent of the viewshed, the *Conservation Analysis* has no discussion of the visual impacts of the proposed house, or how the design of the proposed project might mitigate those impacts.

## Conservation Issues

### Taconic Ridge

The Clott parcel is within the Taconic Mountains Significant Biodiversity Area, designated by the NYSDEC for its large forests, support of rare species of plants and animals, and support for water resources in lowland areas. The forests of the Taconics are considered among the highest quality northern hardwood forest communities in the Hudson Valley region (Penhollow et al. 2006). The Columbia County Natural Resources Inventory states “The...NYSDEC Significant Biodiversity Areas carry no legal weight, but the designations are intended to guide planning, environmental reviews of land development projects, and other land use decision-making, and to promote conservation and stewardship of lands including and surrounding these areas. The intention is to alert landowners, developers, municipal agencies, and other land use decision-makers to the potential for impacts to rare species and rare communities, so that the most sensitive areas can be protected” (Stevens and Travis 2018, p. 110).

The New York Natural Heritage Program has ranked this forest in the 90<sup>th</sup>-95<sup>th</sup> percentile of all Hudson Valley forests based on remote indicators of age, connectivity, core area, known occurrence of sensitive species, and apparent stressors. The extent of this highly-ranked forest area is shown in the Forest Condition Index layer of the NYSDEC [Hudson Valley Natural Resource Mapper](#). The Taconic Ridge is also considered a multistate “priority landscape area” in the Forest Action Plans of New York,

Massachusetts, Vermont, and Connecticut for its high ecological integrity, low fragmentation, and important connections between extensive forests of the Northern and Central Appalachians.

## Large Forests

The Clott parcel lies within one of the largest forest areas in Hillsdale. The forest extends north and south in NY and east into Massachusetts and is part of a Regionally Significant Forest of over 6000 acres (CP&EA 2020). It has been identified by The Nature Conservancy as part of a Forest Linkage Zone that links the largest forest patches in the Northeast and is thus important for maintaining regional ecosystem health, ecological connections, and travel corridors (Anderson et al. 2016). Figure 14 in the Hillsdale Natural Resources Inventory shows the large forest areas and linkage zones.

An indication of the habitat quality of the forests in this part of the Taconic Ridge is that 18 of 20 bird species representative of high quality forests for the Atlantic Northern Forest have been observed here and reported in the NYS Breeding Bird Atlas (Burger and Liner 2005, McGowan et al. 2008). Birds of conservation concern that are known to occur in this part of the ridge include black-throated blue warbler, blackburnian warbler, and worm-eating warbler (McGowan et al. 2008); all are [NYS Species of Greatest Conservation Need](#). Those and other area-sensitive birds of these forests require large, unfragmented forests to maintain local populations.

“The most significant threat to the Hudson Valley’s forest ecosystems is fragmentation into smaller patches” (Strong 2010). Among the reasons that habitat fragmentation is so harmful to native biodiversity are what we call the “edge effects” of developed areas. Forest edges are created where driveways, roads, and clearings occur in the interior areas of forests.

A driveway, for example, creates forest “edge” along its length, which alters the forest environment in many ways. Forest edge invites the intrusion of non-native invasive plant species into the interior of the forest, and also invites nest predators (such as raccoon) and a brood parasite (the brown-headed cowbird), and a host of other disruptions. The ecological effects associated with human activities—lights, noise, wandering pets, contaminated runoff, spread of non-native invasive plants—can extend long distances into the forest, and render large areas no longer suitable for the plant and animal species that depend on habitats of the forest interior. Habitat fragmentation is considered a primary cause of worldwide loss of biological diversity, and has been blamed for the population declines of many forest-interior songbird species in the northeastern US.

Studies have found that the effects of a single residence alter the ecology of approximately 30 acres of forest around that residence, and that effects of roadways, including driveways, can extend well over 300 feet into a forest (Environmental Law Institute 2003). Thus, we are concerned about the ecological effects of, not just the footprints of the driveway and house/garage/pool, but of the much larger area of influence of these features on the Taconic Ridge, an area widely recognized for its biodiversity, water resource, and scenic importance.

## **Steep Slopes**

NYS aerial orthophoto imagery shows that the site was entirely forested in 2001, and Google Earth imagery shows that the forest was cleared to create the 1.2-acre meadow in 2003-2004. The piles of logs at the foot of the meadow suggest that the clearing was done to clear a viewway, not for timber harvest. The clear-cutting predated the enactment of the 2007 Ridgeline Regulation (§245-31) which prohibits clear-cutting without site plan approval. Also, most of the meadow is on slopes of 15+% but less than 25%, so the clearcutting would not have been subject to the Steep Slopes regulation which prohibits cutting on slopes of 25% or greater.

## **Disturbance Area**

We were not sure if the stakes placed by the surveyor indicate the corners of the proposed structures or the outside limits of the disturbance area for construction. Pat Prendergast told us that only two trees would be removed for construction, but perhaps he was referring only to trees over a certain height. We notice that only selected trees and their heights are shown on drawing A1.01 of the draft site plan, but we could not discern the selection criteria for those trees. If there was a size threshold for inclusion, it was not followed consistently as we saw other trees in the construction area vicinity that seem to be of equivalent sizes as those noted in the drawing, but were omitted. Also, while tree height may be relevant to the continuity of the tree line at the ridgetop, diameter at breast height is relevant to the restrictions on cutting and thinning in the Ridgeline zone. There are numerous smaller trees in the southeast corner of the area staked for the septic leachfield as well as larger trees just outside that staked area which may have to be removed so that their roots do not encroach on the leachfield. Additional trees may need to be cut to create the evergreen grove, as explained below.

## **Evergreen Grove**

Drawing A1.01 shows a ca. 1/10-acre area in the forest northwest of the house site where a grove of “native evergreens” are to be planted, presumably to visually screen the house on the neighboring parcel from the proposed house and driveway on the Clott parcel. That proposed grove would be in the midst of a hardwood forest with overstory trees of mixed-age white oak, black oak, red oak, and hickories with (estimated) diameters at breast height in the range of 7-22+ inches.

Native conifers for this purpose include eastern hemlock, eastern white pine, eastern red cedar, and perhaps red spruce or red pine. The actual choices of species should be noted on the site plan. Planting new trees at that location would entail disturbing the roots of existing trees, and perhaps removing some of the existing trees to provide adequate light and space for the new plantings. Of these species, only eastern hemlock and red spruce do well in the shade of other trees, but they grow very slowly, so planted seedlings or saplings would not produce an effective screen for many years. Planting larger trees would require additional disturbance to the existing forest. When white pine and red pine grow in the shade of other trees, they tend to self-prune the lower branches and produce tall boles that are branchless for two-thirds of their height. In this setting, those pines would therefore provide an inadequate screen except perhaps for some of the early years when low branches would still be present. Non-conifer evergreens that

could provide screening include mountain laurel, great rhododendron, and American holly. Although native to this region in general, none of these species is typical of this setting in the Taconics, so all would probably need some special attention to survive and thrive.

If creating the evergreen grove would require removing more than 50 percent of the trees exceeding six inches diameter at breast height in an area of 2000 square feet (0.04 acres) or larger, that would meet the town code's definition of "clear-cutting" (§245-91). The Ridgeline Regulation prohibits clear-cutting or thinning of trees where it will "disturb the continuity of the tree line" (§245-31.B[1]). The proposed evergreen grove would be at the very crest of the ridge at elevations 1434-1438 feet, so cutting any of the overstory trees is likely to break the ridgetop tree line. The site plan should explain how many existing trees would be cut to accommodate the evergreen grove, or else include a description of how these 18 new evergreens would be planted and maintained without harming the trees of the existing forest. Replacement of mature hardwood trees with seedling or sapling evergreens will still leave a gap in the canopy that will remain unfilled for many years as the young trees grow to their full size.

## **Light Pollution**

The Taconic Mountains extend 60 miles along the New York, Massachusetts, and Connecticut borders and join with the hills of the Hudson Highlands in southern Dutchess County. Birds and bats are concentrated over north-to-south-oriented ridges during spring and fall migration periods when they take advantage of the thermal air currents and updrafts to propel their flights. Birds are drawn to night lights along their migration routes and often become visually entrapped in the lit area, circling the lights and depleting their energy needed for migration and putting them more at risk of colliding with buildings and infrastructure.

Night lights can also disorient, repel, attract, entrap, or kill a wide range of other organisms including moths, fireflies, other insects, and frogs, in addition to birds. Lights can reduce reproductive success of birds and amphibians, disrupt communication between animals, and interfere with predator-prey relationships. Lights are very disruptive to the wildlife that depend on darkness for hunting and shelter, and for whom lights trigger certain metabolic or behavioral reactions. Light pollution has been associated with huge reductions in insect populations, and is a significant contributor to catastrophic worldwide insect declines.

Where outdoor lights are needed, their impacts will be reduced if they are motion-activated, shielded and directed downward (instead of outward or upward), and use insect-friendly light technology. LED lights that are filtered to be yellow or amber attract many fewer flying insects than blue or ultraviolet lights. Although a note on drawing A3.01 says that all exterior lights and landscape lighting will be "dark sky compliant," the actual specifications of those lights should be included on the site plan.

Indoor lights are also disruptive to insects and other wildlife. The proposed house design includes lots of glass on the south-facing wall—the wall that faces the large viewshed—so large amounts of nighttime light will spill from indoors to the near and distant landscape. This could be mitigated by significantly reducing the area of glass.

## Scenic Impacts

The spectacular view from the house site encompasses many square miles of Hillsdale, Copake, and Ancram and some of the Taconic hills in Massachusetts (see photo). The visual impacts of a house at this location - the house itself in daytime and its indoor and outdoor lights at night—will extend to that entire viewshed. The current design shows much of the south-facing wall in glass. While the “low reflective” glass specified in drawing A3.01 may reduce the reflective glare, it will not prevent indoor lights from spilling to nearby habitats and to the entire viewshed. Less glass would allow less spillage and reduce the visual harm to this scenic hillside.

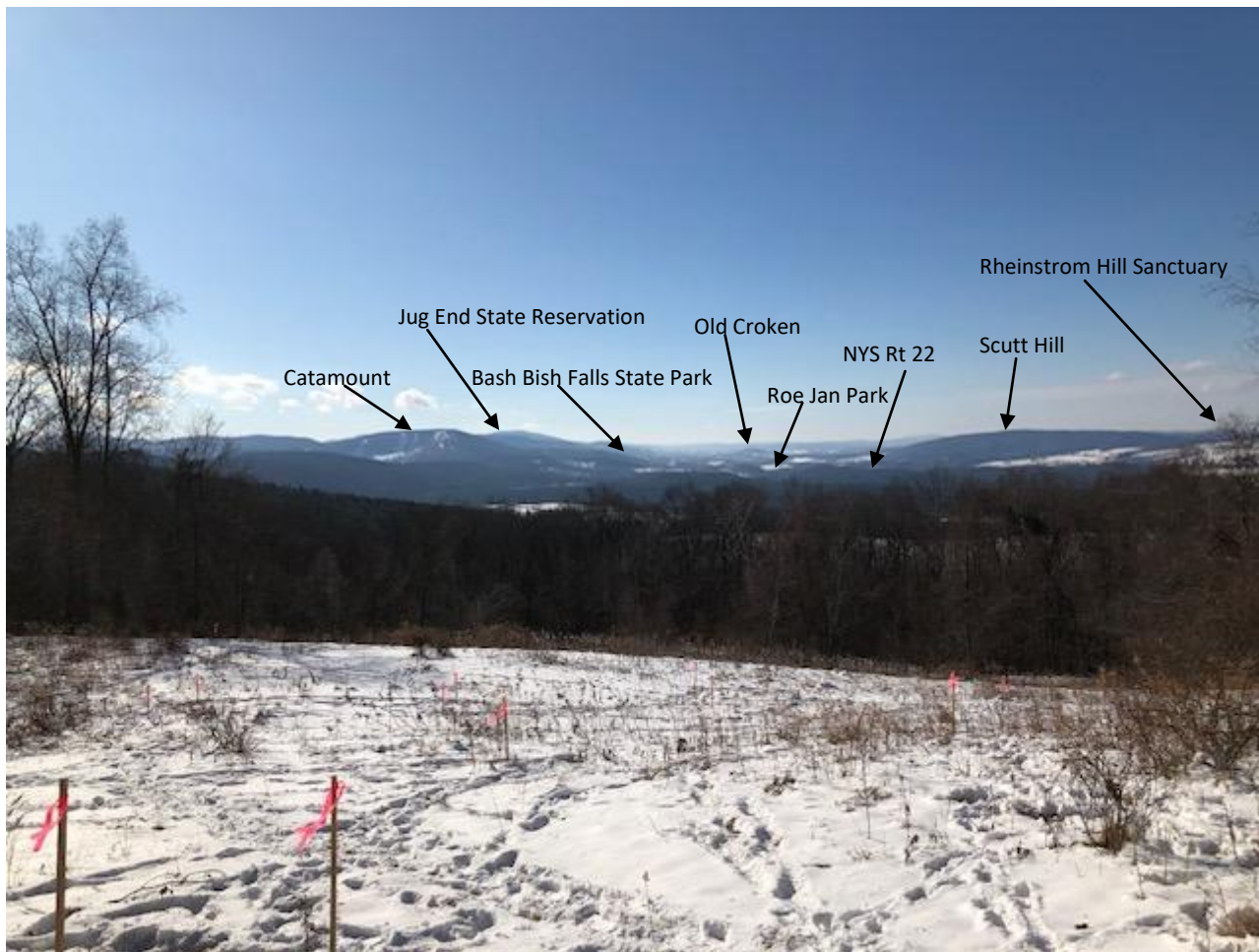
In addition to numerous public roads, the viewshed includes many public-access lands including parts of Mt. Washington State Forest and Bash Bish Falls State Park in Massachusetts; Taconic State Park in Copake; Old Croken in the Drowned Lands Conservation Area and Fox Hill in the Overmountain Conservation Area in Ancram; and the Roe Jan Park and the Rheinstrom Hill Audubon Sanctuary in Hillsdale.

The visual impacts of houses built in locations like this were the very reason that the Ridgeline Overlay Zone was created in 2007. The Ridgeline Regulation requires that site plan approval only be granted if the proposed development “[w]ill not result in a degradation of scenic character” and “will locate...buildings and other structures in a manner that minimizes their visibility from a public road” (245-31.A[7][a]). The scenic vistas from all the areas within the viewshed of the proposed house will be degraded by the structures and lights at this site. The proposed house site on the Clott parcel has no visual screening from the immense viewshed. Cutting of overstory trees to accommodate the evergreen grove on the crest of the ridgeline could create a visible gap in the ridgeline forest for the many years until the planted trees grew to maturity.

## Conclusion

We recognize that every landowner has the right to build a house on an approved lot, and we do not suggest otherwise. But there are ways to develop this parcel that would reduce the habitat fragmentation, light pollution, scenic impacts, and other harms. Locating the new house nearer Syre Lane would entail the cutting of more trees than the current plan, but would maintain a large area of forest intact, reduce the edge effects of the long driveway, concentrate the disturbance near the existing road, and greatly reduce the viewshed and thus the impacts to the scenic landscape for the whole region. The currently proposed house site could still be a fabulous lookout and picnic spot that would not intrude on the scenic vista from the surrounding landscape. We are not so naïve as to think that a viewless house would necessarily satisfy the dreams of the Clotts, but are hoping that understanding the ecological and scenic importance of the Taconic Ridge might prompt new ideas about the design of this project.

Over recent decades we have witnessed the chipping away of the intact forest of the Taconic Ridge. The previously-forested hillsides and summits of the Taconics are now teeming with single houses on subdivided lots, and the once-dark hillsides are dotted with nighttime lights. Even the NYS designation of



View from the proposed house site.

the Taconic Mountains Significant Biodiversity Area nineteen years ago and Hillsdale’s adoption of the Ridgeline Overlay Zone eighteen years ago have scarcely slowed the pace or altered the style of development on the ridge despite the widely recognized importance of this area to the people of Hillsdale and the wider region. The town code is specific, however, in requiring close attention to the visual impacts of new development in the Ridgeline zone. Although each new house may seem inconsequential, the ecological zone of influence of a driveway, house, and yard extends well beyond the footprints of those features; the visual impacts of an exposed house high on a hillside can be vast; and the cumulative impacts of multiple such houses can significantly degrade the natural and scenic values of the Taconic Ridge.

All of us in our various roles—residents, citizens, landowners, and town officials—are the caretakers of the land and thus responsible for Hillsdale’s ecological, visual, and cultural landscapes. For all practical purposes, land development is forever and the decisions that we make today will affect the land for generations to come. The CAC hopes that the landowners and the Planning Board can arrive at a design for this project that will minimize harm to the Taconic Ridge habitats and the scenic landscape and create a wonderful home for the Clotts.

## Recommendations

Our primary recommendation is to move the house site nearer to Syre Lane, to minimize the forest fragmentation and ecological consequences and reduce the size of the viewshed. Whether or not that can be done, other measures can be taken to reduce the impacts of a new house on this lot. For example,

- Design the driveway to be as narrow as possible and maintain a closed tree canopy over the driveway to minimize the potential incursions of brood parasites (e.g., brown-headed cowbird) and nest predators that are just two of the many threats to forest-interior wildlife posed by forest fragmentation.
- Reduce the area of window glass to reduce the spillage of indoor light to nearby habitats and the viewshed, and include other architectural measures to reduce light pollution.
- Design all outdoor lighting to minimize effects on nearby habitats and on migratory birds and bats.
- Omit the evergreen grove, or else design it to avoid cutting the overstory trees or damaging their roots.

The site plan review and the SEQR process can be powerful tools for gathering information and evaluating potential environmental impacts of a proposed development project, but only if the lead agency insists on thoughtful, thorough, and accurate answers to the EAF questions and accompanying *Conservation Analysis*. We recommend that the Planning Board request the following of the applicant:

- To the *Conservation Analysis* add descriptions of the land, discussions of the resources at risk, and descriptions of mitigation actions to reduce the impacts.
- Create the additional maps listed in the Hillsdale code for a *Conservation Analysis*:
  - steep slopes
  - extent of the scenic viewshed
  - trees of  $\geq 18$ " dbh in the vicinity of the proposed construction (Drawing A1.01 shows selected trees by height but not by diameter at breast height.)
  - areas of significant habitat based upon available mapping
  - locations of general vegetation types as well as the identification of all vegetation proposed for thinning or clearing, including the proposed evergreen grove
- Substitute corrected information from the Hillsdale NRI, as described on page 3 of this report (slopes, watershed, wildlife, Significant Biodiversity Area), and discuss the implications of the natural resource information for the proposed project on the Clott parcel.
- Correct the answers to questions 4, 14, and 15 of the Short EAF Part 1, as explained above.
- Correct the answers to questions 5, 6, and 7 of the Visual EAF Addendum, as explained above.
- If not already done, stake and flag the limits of disturbance for construction of the proposed driveway, garage, house, pool, leachfield, and utility corridor.
- On the site plan, list the native evergreen species to be planted in the area northwest of the house site; explain which existing trees on and near the ridgeline crest would need to be cut to accommodate the plantings and which would likely have their roots disturbed; and explain how the plantings will be maintained until mature.

- On the site plan, describe the specifications of the “dark sky compliant” outdoor lights.
- Show an alternate site plan for a house situated close to Syre Lane that would reduce the forest fragmentation and reduce or eliminate the impacts to the scenic landscape.

We also recommend that the Planning Board visit the site once the full extent of the disturbance areas have been staked (if they have not been staked already).

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