

DAVID K. GORDON EMILY B. SVENSON 42 CATHARINE STREET POUGHKEEPSIE, NY 12601 (845) 470-2027

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BY ELECTRONIC AND U.S. MAIL

Hon. Fred Costello, Supervisor Town Board Members Town of Saugerties 4 High Street Saugerties, NY 12477

> Re: Winston Farm Planned Development District Comments on Draft Scoping Document

Dear Supervisor Costello and Members of the Town Board:

The following comments are submitted on behalf of Catskill Mountainkeeper to recommend additions to the scope of environmental review for the Winston Farm Planned Development District (the "PDD").

Catskill Mountainkeeper is a nonprofit organization whose mission is to protect the region's forests and wild lands; safeguard air and water; nurture healthy, equitable, and sustainable communities; empower environmental justice communities; and accelerate the transition to a 100% clean and just energy future in New York State and beyond.

The Winston Farm PDD is much more than a "project"; it represents a fundamental change in the Town of Saugerties, adding a new development hub as large as the existing Village. The PDD's build-out would replace 800 acres of forest, meadow and stream corridor with hundreds of acres of paved surface and buildings. The Saugerties gateway to the Catskills would be forever altered.

The risks presented by the PDD are many, but Catskill Mountainkeeper has focused its comments on two issues most central to its mission: water resources and wildlife habitat. To aid the Town in its review, we enclose two professional reports which have been prepared specifically for this site. We respectfully request that these reports be considered and included in the DGEIS.

1. Hydrology report by Certified Professional Geologist Paul Rubin of HydroQuest, "Hydrology and Land Use Considerations for Protecting Recharge Pathways to the Beaver Kill Aquifer," June 2022 (the "HydroQuest Report"). This is a companion report to HydroQuest's January 8, 2022 report, "Ground Water/Aquifer Protection in the Town of Saugerties," which was commissioned by the Town of Saugerties Planning Board.

2. Biodiversity assessment by biologists Christopher Graham, MS, and Erik Kiviat, PhD, of Hudsonia, Inc., "Preliminary Biodiversity Assessment of the Winston Farm Property," 18 September 2022 (the "Hudsonia Report").

Based on these reports and other available data, we submit the following comments related to water and wildlife issues. Further, we recommend development of an environmentally compatible alternative to the proposed sprawling development pattern (the "Balanced Open Space Alternative"). Finally, we note additional issues that should be clarified in the Scoping Document.

### WATER RESOURCES

The groundwater and surface water resources on the Winston Farm site require careful study, as the build-out of the PDD would affect not only on-site water resources but also the availability of clean drinking water for the community.

## **Groundwater supply and demand**

Potable water supply is a critical limiting factor in the amount of development the Winston Farm site can accommodate.

The public water supply available through the Village of Saugerties is already stressed, particularly during the summer months when demand is high. The Town of Saugerties has a total allocation of 650,000 gallons per day from the Village of Saugerties water system, and the Town's current use exceeds that allocation multiple times each year. The Village's ability to increase the allocation is limited as the combined Town and Village demand is approaching the maximum volume that may be withdrawn from the Blue Mountain Reservoir, and no alternate sources have been developed.

Sound planning requires that water consumption on Winston Farm should neither consume water from the public supply nor deplete the aquifer that it shares with surrounding property owners. Before potentially compromising or overextending the quantity of water available in the Beaver Kill Aquifer, it is essential to determine the aquifer's hydrogeologic properties and its full nature and extent. This analysis must take place before a zoning change for the protection of existing residents and businesses.

# A. Evaluate groundwater available within the Beaver Kill Aquifer

The Beaver Kill Aquifer has finite physical boundaries, thicknesses, recharge quantity, and available groundwater that must be assessed comprehensively. Reliable data is needed on the amount of water the Beaver Kill Aquifer can safely produce.

The Village commissioned a well test in 2018, but HydroQuest reviewed that test and identified several serious limitations. First, the test lacked modeling of the subsurface flow paths and assumed instead that there were no hydrogeologic boundary conditions that would limit supply.

The HydroQuest Report provides documentation of bedrock aquifer boundary conditions to both the west and east.<sup>1</sup> Second, the water level in the test well did not reach stabilization as required by state standards. Finally, the test was not conducted at a rate reflective of anticipated demand.<sup>2</sup>

Robust analysis of the Beaver Kill Aquifer is needed to quantify the available groundwater supply.

# Addition to scope:

- ❖ Evaluate existing available groundwater supply from wells within the Beaver Kill Aquifer
  - Characterize the Beaver Kill Aquifer beneath the site and beyond to determine the quantity of groundwater that can be safely withdrawn from it
    - Compile and analyze existing data including that provided in the HydroQuest Report, existing aquifer testing, well logs from drillers, NYSDEC, DOH, and other sources
    - Delineate the vertical and horizontal extent of the Beaver Kill aquifer on and off the project site, its boundary conditions, groundwater recharge locations, annual recharge, aquifer composition and porosity, the groundwater flow direction within it, hydraulic conductivity, transmissivity, hydraulic gradient, storage capacity, and safe yield
  - ➤ Conduct 72-hour pump testing of wells on the Winston Farm site
    - *Pump testing should be conducted during dry conditions*
    - Offsite wells should be monitored both to the north and south of the Winston Farm site that are known or determined to draw water from within the Beaver Kill Aquifer
- Analyze how climate change could affect the supply of water due to changing weather patterns

## B. Quantify anticipated water demand of PDD development

In order to analyze whether the proposed zoning is appropriate for the available water supply, a reliable estimate of water demand must be produced. Winston Farm's EAF Part 1 estimated 500,000 gallons per day but showed no data supporting that calculation. Even that level of demand is likely to exceed the sustainable supply of water on site.

A careful estimate must be based on a reasonable worst-case scenario of build-out considering the allowed uses and densities in the proposed zoning. Seasonal demand must be analyzed as proposed uses like a water park or concert venue would add water demand during the summer months when supply is limited.

<sup>&</sup>lt;sup>1</sup> HydroQuest Report at 9.

<sup>&</sup>lt;sup>2</sup> HydroQuest Report at 43.

- ❖ Produce water use estimates for development under the proposed zoning
  - Consider a reasonable worst-case scenario build-out, including high water consumption uses that would be supported by the zoning
  - Estimate daily water usage during different seasons of the year
- ❖ Compare water supply with water demand during various seasons

## C. <u>Determine how the Winston Farm water supply would relate to the public water system</u>

Representations have been made that Winston Farm would provide a supplementary or alternate water supply for the Village of Saugerties water system. Based on estimates of water supply and demand, it does not appear that Winston Farm wells would yield supply beyond the demands of the site, especially during the critical summer months and during drought periods.

# Addition to scope:

- ❖ Analyze projected supply and demand to determine whether Winston Farm's water supply would exceed its demand, allowing supply of excess to the Village system, or whether the demand would exceed the supply, resulting in a draw from the Village system ➤ Predict the surplus or deficit in supply in each season of the year
- ❖ Perform a cumulative impact analysis to catalog other active development projects requiring public water and quantify the new public water demand anticipated in the next ten years
- Confer with Village and Town leadership on water connection options and describe the proposed physical and legal mechanism for interconnecting Winston Farm with the Village water system
  - > Explain how Winston Farm water would be used as a supplemental or back-up supply for the Village system

### D. Analyze development impacts on groundwater quality and quantity

For groundwater to stay clean and plentiful, the aquifer recharge area must be protected. The HydroQuest Report demonstrates that the recharge area for the Beaver Kill Aquifer is likely quite limited, and that the Winston Farm site constitutes much of the primary recharge area for the Beaver Kill Aquifer.<sup>3</sup>

Heavy development in the aquifer recharge area presents significant risks. First, hardening the land surface disrupts the natural infiltration of water into the ground. "Major roadway and building construction, utility infrastructure development, and grading . . . may significantly disrupt . . . naturally-occurring groundwater recharge."

<sup>&</sup>lt;sup>3</sup> HydroQuest report at 3-8.

<sup>&</sup>lt;sup>4</sup> HydroQuest Report at 8.

Second, a developed landscape can produce contaminants that pollute the aquifer. Normal development introduces pollutants like lawn chemicals and automotive fluids which can seep into the ground, and industrial activities like manufacturing or warehousing can introduce serious contamination risks.

## Addition to scope:

- ❖ Map the likely recharge areas for the Beaver Kill Aquifer within the Winston Farm site
  - ➤ Use this data to produce a map of the areas where development could occur without interfering with, or polluting, groundwater recharge
- Explain whether the zoning change request would leave intact the Aquifer Overlay and Sensitive Area Overlay regulations which currently apply to much of the site
- ❖ If pollution does enter the aquifer and pollute the groundwater, identify alternate water sources that would be available to supply development at the site
- ❖ *In the section on consistency with community plans, add:* 
  - ➤ 2005 Saugerties Groundwater Protection Plan
  - ➤ Aquifer Protection Overlay District
  - > Sensitive Area Overlay District

## **Impacts on the Beaver Kill**

The Beaver Kill wraps around and through the Winston Farm site, and runoff from the site travels over the land surface and through groundwater to the Beaver Kill. The Winston Farm development plan includes a new wastewater treatment plant that would discharge to the Beaver Kill.

As the HydroQuest Report describes, the section of the Beaver Kill that runs through Winston Farm is relatively flat and follows a meandering path.<sup>5</sup> A headwater stream with such a profile can "have limited ability to assimilate contaminant additions," including treated wastewater.<sup>6</sup>

- ❖ Measure and predict typical seasonal flow conditions in the Beaver Kill
  - Measure the water level and flow rate of the Beaver Kill weekly for a year
  - Estimate future water level and flow ranges during higher and lower precipitation years, based on past seasons and climate change predictions
- ❖ Model the changes in flow and water quality that can be expected from both wastewater and stormwater inputs throughout the year

<sup>&</sup>lt;sup>5</sup> HydroQuest Report at 7-11.

<sup>&</sup>lt;sup>6</sup> HydroQuest Report at 11.

- Evaluate the water level and flow changes that can be expected based on wastewater and stormwater inputs
- Calculate anticipated levels of BOD, phosphorus, and SPDES-permitted contaminants that can be expected in the Beaver Kill

### WILDLIFE HABITAT

The Hudsonia Report provides a preliminary overview of the wealth of valuable wildlife habitat that exists across the Winston Farm site. In all, Hudsonia identified 18 types of ecologically significant habitats, comprising 782 acres of the site. Their most significant findings include:

- extensive, unbroken forest, most of which is part of a regionally significant, 1,200-acre forest block;
- rocky areas that harbor rare plants and animals;
- two large meadows of > 50 acres each;
- 17 woodland pools;
- two buttonbush pools;
- large and diverse wetlands, including extensive 100-year flood zone wetlands;
- a large great blue heron rookery; and
- roughly 1.25 miles of a major perennial stream, the Beaver Kill, that may support a population of wood turtles, a Species of Special Concern in New York.<sup>7</sup>

The following are some of the key categories of habitat on the site.

### Meadows

While the previously farmed fields of Winston Farm may be seen as suitable for development, the Hudsonia Report makes clear that these fields are essential habitat for numerous species. The hayfields may provide nesting or feeding grounds for rare breeding birds, and wood turtles could forage in the meadows, while pollinators rely on the diverse wildflowers. Large meadows have become rare in the region as they have become developed, and meadows of this size and quality are "uncommon in the Town of Saugerties and surrounding towns." In addition to reviewing past field studies, Hudsonia conducted a preliminary bird survey from neighboring locations and observed three raptor species (a red-tailed hawk with prey, an American kestrel, and two bald eagles), eastern meadowlarks, and a migrant flock of rusty blackbirds.

### **Forests**

Over half the Winston Farm site is covered in upland hardwood forest. The forest is part of a much larger, unbroken core forest block of over 1,100 acres. The Saugerties Open Space Plan identifies the forest as part of the Limestone and Shale Ridge important area. This ridge is part of the larger "Hudson Valley Limestone and Shale Ridges" identified as a significant

<sup>&</sup>lt;sup>7</sup> Hudsonia Report at 1.

<sup>&</sup>lt;sup>8</sup> Hudsonia Report at 8.

<sup>&</sup>lt;sup>9</sup> Hudsonia Report at 17.

biodiversity area by the Hudson River Estuary Program.<sup>10</sup> The Hudsonia Report explains how not only destruction of forests, but fragmentation of large forests with roads and driveways, has caused the decline of numerous species of mammals and birds that rely on intact forest blocks.

## Wetlands

While the EAF states that there are 26 acres of wetland on site, Hudsonia identified 106 acres of wetland in its preliminary assessment. These wetlands fall into a variety of categories, each of which provides habitat for a constellation of species. The Hudsonia Report describes the myriad amphibians, reptiles, birds and other species likely to inhabit the Winston Farm site. It also explains how wetlands suffer not only from direct disturbance but from disturbance of the surrounding upland areas and connections among wetland complexes which form an integral part of the habitat. Large portions of the surrounding land form the watershed for these wetlands as well.<sup>11</sup>

A complete map of wetland resources on the site must be created, including regulated and unregulated wetlands. The applicant should consider expanded wetland protections enacted earlier this year that assign state protection to a wider range of wetlands smaller than the 12.4-acre threshold.

#### Streams

The Beaver Kill winds through the Winston Farm site, accompanied by wetlands along the stream corridor. Wood turtles have been observed there. <sup>12</sup> In addition, numerous headwater tributaries of the Beaver Kill flow through the site. <sup>13</sup> A previous field survey identified a pocket of unusual heavily shaded, cool habitat along one of these tributaries, and a rare northern dusky salamander was observed. <sup>14</sup>

The Hudsonia Report's summary of the impacts of the proposed development is dire:

The proposed development project at Winston Farm, or any project of its scale, would be devastating to the ecosystems, wildlife, and plants of the site and the surrounding region. It would destroy large areas of significant habitat, much of it forested, and fragment much of the remaining forest. This would severely reduce the capacity of that forest to support numerous wildlife species that require large areas or areas distant from human disturbance—e.g. many songbirds and certain raptors, snakes, and large mammals—likely reducing or extirpating their populations on and around the site. The two regionally important, large meadows would be filled with roads, buildings, parking areas, and landscaped vegetation, ending their ability to support rare grassland-breeding birds and wintering raptors, and drastically reducing habitat for pollinators, nesting turtles, and other meadow-

<sup>&</sup>lt;sup>10</sup> Wildlife and Habitat Conservation Framework, https://www.dec.ny.gov/docs/remediation\_hudson\_pdf/hrebcf.pdf

<sup>&</sup>lt;sup>11</sup> HydroQuest Report at 4 shows the watershed of the large state-designated wetland.

<sup>&</sup>lt;sup>12</sup> Hudsonia Report at 26.

<sup>&</sup>lt;sup>13</sup> HydroQuest Report at 4-6.

<sup>&</sup>lt;sup>14</sup> Hudsonia Report at 12.

associated species. Many wetlands unmapped by the state or federal government would likely be filled, drained, excavated, dumped in, or polluted, and others cut off from surrounding forest to animals that require multiple habitat types, namely pool-breeding amphibians as well as turtles and birds of conservation. concern. Water quality in the Beaver Kill, its perennial and intermittent tributaries, and the streams it flows into may be impacted by increased runoff, flooding, siltation, and pollutant loading caused by extensive forest clearing and impervious surfaces, high vehicular traffic, chemical-heavy vegetation management, and large volumes of wastewater effluent.

The Hudsonia Report provides a preliminary map of the areas of the site where development would least impact habitat, at page 34. Careful field study of the habitats on the site is needed, which can be used to refine a map of the areas most ecologically sensitive and those where development may have less impact.

- \* Assemble existing data on Winston Farm habitats and rare species observations, including but not limited to, the Hudsonia Report, New York Natural Heritage Program data, and previous Hudsonia reports (Barbour 1991, Stevens and Graham 2018)
- ❖ Map ecologically significant habitats on the site using the methods of Kiviat and Stevents (2001), described on page 6 of the Hudsonia Report
- ❖ Delineate all wetlands on the site, including regulated and unregulated wetlands
- Conduct robust surveys for the species identified under "Recommended surveys" on pages 28-30 of the Hudsonia Report
  - > Categories include:
    - Breeding birds of conservation concern
    - Wintering raptors
    - Snakes
    - Turtles
    - Endangered bog turtle and northern cricket frog
    - Pool-breeding amphibians
    - Butterflies and odonates of conservation concern
    - Rare plants
  - These studies must be conducted by competent biologists using the protocols outlined by Hudsonia
- ❖ Identify areas most critical to climate resilience (see Hudsonia Report at 27-28)
- Using completed data, develop a map of areas where development would have the least impact on wildlife, similar to the map on page 34 of the Hudsonia Report.

### BALANCED OPEN SPACE ALTERNATIVE

The PDD has been touted as protecting open space, but there is no evidence that quality open space would actually be protected. The proposed PDD would rezone the entire area for a variety of uses, including commercial, residential, industrial and recreational. No portion of the site is reserved as guaranteed open space, and the zoning contains no open space requirements.

Quality open space must be a foundational, determining factor in the ultimate use of the Winston Farm land. The Town's Comprehensive Plan section on Winston Farm quotes the guiding principles of the 2009 Winston Farm High Technology Feasibility Study & Master Plan, including: "At least 50% of total site area preserved as open space." In fact, the 2009 Master Plan featured a concept plan with 73% open space (page 5), demonstrating that an economically viable project and substantial open space can co-exist.

The value of open space can vary widely. We urge the Town to use the SEQRA process to identify the parts of the site with the greatest environmental value and identify those areas as permanent open space at the earliest possible stage. The areas slated for preservation should be subject to permanent protection and should not be zoned for development. Leaving open space selection to a later point in the subdivision and site planning process would likely result in preserving only isolated scraps of land with little conservation value.

To that end, we recommend an addition to the alternatives analysis to create a Balanced Open Space Alternative.

- ❖ Add Balanced Open Space Alternative to alternatives analysis
  - Develop map of areas where development would have least impact on groundwater (discussed above)
  - Develop map of areas where development would have least impact on wildlife habitat (discussed above)
  - > Develop similar mapping of areas with least impact on other resources, including scenic resources, historical resources, noise/light, community character, etc.
  - > Overlay these maps to identify the areas with greatest and least sensitivity
  - Identify 27% of the land with least impact and designate that areas as the development envelope, leaving 73% of the site preserved as open space (to match the ratio in the 2009 concept plan)
  - Evaluate the development that could take place within that envelope
  - Evaluate the benefits that this design would generate

#### **CONCLUSION**

The preceding comments focus on Catskill Mountainkeeper's central priorities of water resources and wildlife habitat. However, Catskill Mountainkeeper also adds its support to the numerous other issues raised by diverse members of the community and urges the Town Board to ensure the Scoping Document includes the following:

- <u>Historic Resources</u> The myriad historic resources on the site require careful study, including the buildings, landscapes and infrastructure with historical significance. These include but are not limited to the Carriage Road, the Winston mansions, the Wynkoop cemeteries, the designated Wynkoop House, fieldstone walls including those surrounding the paddock where J.O. Winston wintered the mules he trained to build the Shandaken Reservoir, bridges, culverts, pathways, lanes, trails and early twelve foot roads. The site's role in Native American history, African American history, and its significance in the region must be documented and protected.
- <u>Climate Change</u> SEQRA regulations require consideration of "measures to avoid or reduce both an action's impacts on climate change and associated impacts due to the effects of climate change such as sea level rise and flooding."<sup>15</sup> As others have stated, this analysis should include the energy consumption associated with the PDD (including indirect effects like vehicular travel) as well as the loss of carbon-sequestering vegetation. But as noted above, the effects of climate change should also be integrated into consideration of groundwater supply and wildlife habitat stress.
- <u>Noise and Light</u> The draft Scoping Document indicates that the DGEIS will "discuss" impacts of noise and light, but these significant impacts require more than discussion. The impacts of a large concert venue or recreation facility must be quantified. These impacts will not only affect direct neighbors but will change community character.
- <u>Land Uses</u> The PDD proposes entirely new zoning including a variety of land uses that could have significant impacts, like an amphitheater or adventure park. In each section of the Scoping Document where the applicant will discuss mitigation options, it may be appropriate to consider eliminating potential uses as a mitigation measure. For instance, noise impacts could be mitigated by eliminating outdoor concert venues.

In conclusion, we thank the Town Board for its careful consideration of the studies needed to truly evaluate the carrying capacity and best use of the Winston Farm lands. The studies recommended above will provide the board with critical data to chart a path forward.

Sincerely,

Emily Svenson

<sup>&</sup>lt;sup>15</sup> 6 NYCRR § 617.9(b)(5)(i).