ALEKSANDRA MOCH
SOIL & WETLAND SCIENTIST
CERTIFIED PROFESSIONAL IN SOIL
EROSION AND SEDIMENT CONTROL
GEOLOGIST/HYDROGEOLOGIST
LANDSCAPE DESIGNER

February 1, 2026

Inland Wetland Agency
Town of Woodbridge
11 Meeting Lane
Woodbridge, CT 06525

Re: Proposed 100-Unit Multi-Family Development at 27 Beecher Road

Responses to the letter by REMA, dated January 20, 2026, to the Inland Wetlands Agency.

In the executive summary, REMA (George T. Longan and Sigrun N. Gadwa) provides their *key findings*:

- *Independent field observations by REMA and the Town's third-party reviewer, Martin Brogie, Inc., indicate that the delineated wetland boundary downgradient of the proposed development understates the actual extent of wetland soils and hydrology. In multiple locations, wetland indicators were observed further upslope than shown on the submitted plans.*

Martin Brogie, LEPO (MBI), review of the Moch's wetland boundary dated January 14th, disagrees with the locations of two wetland flags. Both of them were corrected. Flag #20 was corrected during the field investigation on January 19, 2026, and flag #6 was moved to the correct location on February 7, 2026. MBI's report also requested that the old wetland flags be reinstalled to be more visible. All the old wetland flags were found in the field, except for two (#19 and #17). New flags were added to old locations to make them more visible. Therefore, all concerns raised by MBI were addressed.

REMA states that, *in multiple locations, wetland indicators were observed farther upslope than shown on the submitted plans*. The site is privately owned with no public access, so it is unclear what type of observations led to this conclusion. In CT,

wetlands are delineated by soil type, not vegetation or hydrology. Without presenting the soil data collected in the field, this statement lacks the required evidence.

- *The applicant's environmental assessment concludes that no adverse impacts will occur, but does not include a systematic evaluation of changes to surface water flow, shallow groundwater discharge, or wetland hydroperiod. These issues are central to wetland function and require quantitative analysis.*

The quantitative analysis of the development site was provided by the site engineer via the design and sizing of the stormwater management system. There are no activities proposed within the wetland area; therefore, there will be no impact on the wetland or wetland hydroperiod. The level of wetness and the main sources of wetland hydrology and hydrogeology are provided in the environmental assessment report.

Per the stormwater design, the increased stormwater runoff will be collected by the proposed in-ground infiltration system, as required by the Connecticut DEEP 2024 Stormwater Quality Manual. During a storm event, runoff from hard surfaces will be captured by catch basins with deep sumps and routed through oil/grid separators before reaching the in-ground infiltration system. The system consists of open-bottom units embedded in gravel. The units allow water to infiltrate into the ground, vertically and horizontally. Groundwater flow mimics topography; therefore, groundwater from the development site will flow toward the wetland area. There will be no change to it. The stormwater collected from hard surfaces, instead of running over the surface and concentrating and causing soil erosion, will be slowly released from the infiltration system into the groundwater and flow into the wetland. There will be no water loss or increase. The only change will be in how the water is conveyed to the wetland.

The closest to the wetland discharge is from the level spreaders. They will be installed to receive overflow from the in-ground chambers once they fill up. Most of them will be dormant waiting for the rain, which exceeds 6.2' over 24 hours, to

receive a flow. The level spreaders will look like long trenches filled with gravel, allowing water to flow in a non-erosive overland sheet flow. Trinkaus Engineering, LLC, had recommended adding a concrete lip to the edge of the level spreaders to ensure an even distribution of water at the discharge area. This improvement was added to the design.

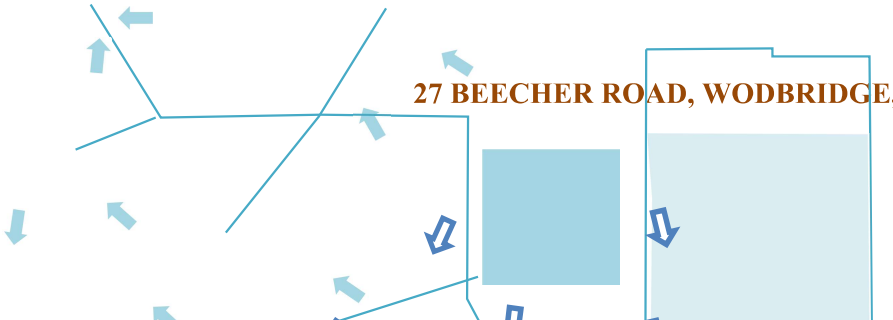
The lower-level spreader of each set will overflow the footing drain. The source may make them more active during an average storm event. Its location, greater than 100 feet from the wetland, will allow the water to sheet flow over the gentle slope, infiltrating and spreading through the vegetative cover before reaching the wetland.

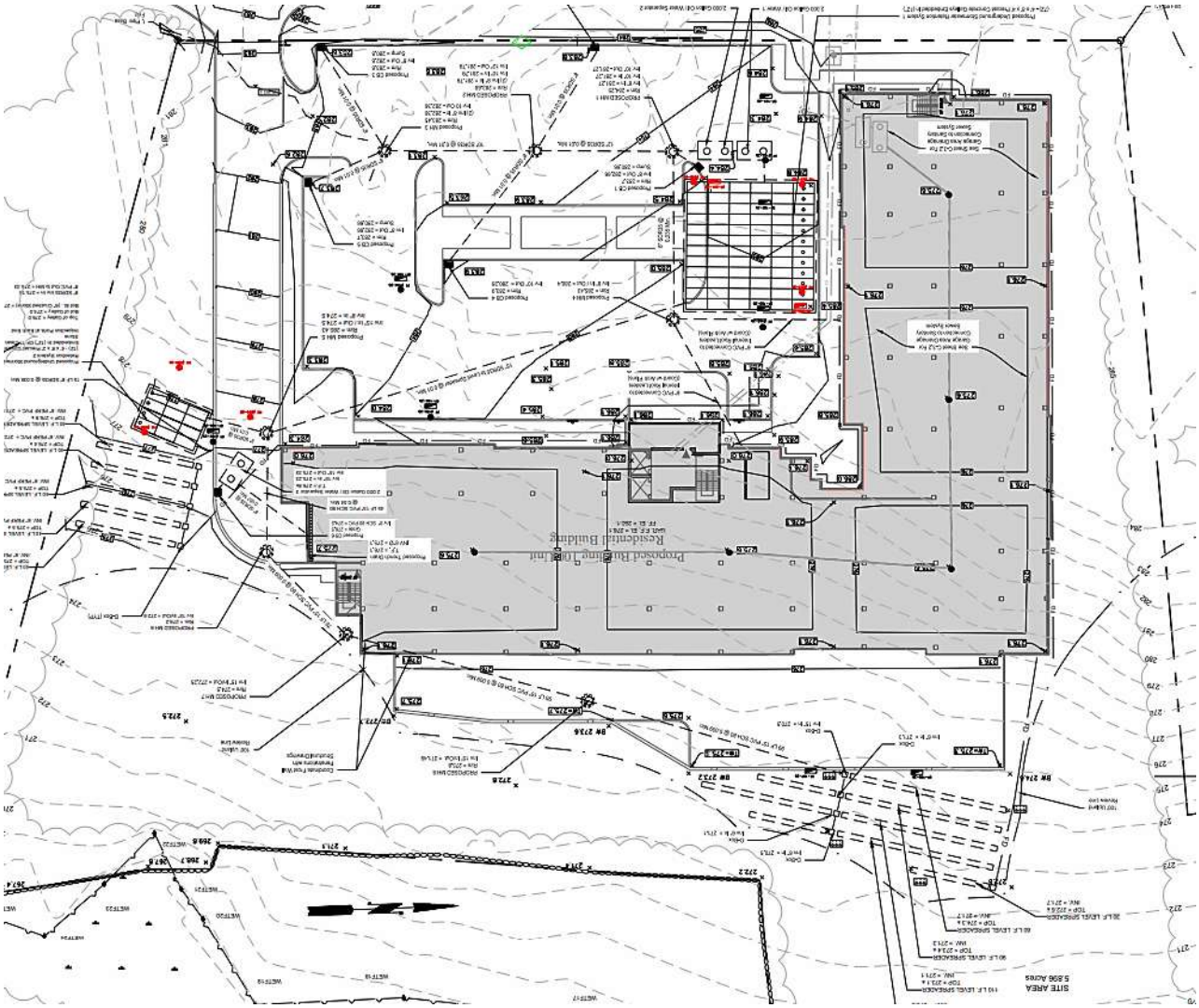
Groundwater discharge from the front infiltrator will be interrupted by the building, which will be constructed downslope. To prevent a concentration of flow around the southwestern corner, a gravel bed will be installed beneath the slab. As such, the building will act as a large level spreader while allowing the flow to pass beneath the slab. This passage will help evenly distribute the flow before it reaches the wetland. The above measures will ensure there is no change in the wetland hydroperiod.

As certified by the Atlantic Consulting & Engineering, LLC (ACE):
The runoff resulting from the proposed site improvements will be retained in an on-site retention system. The runoff from the parking area and building roof will be routed to a set of 576 linear feet of 48" concrete galleries. The runoff from the driveway ramp will be routed to another set of 96 linear feet of 24" concrete galleries.

The stormwater runoff is further mitigated on-site. This system will reduce the net peak runoff during a 100 Year (2%) rainfall event to 22.68 c.f.s., down from its current peak of 23.14 c.f.s. The proposed retention system provides a total of 13,497 ft3 of storage, which will be adequate to maintain the net runoff during a 100 Year rainfall event, meet the Water Quality Volume, and provide groundwater recharge.

The report concludes*: Based on the above information, the proposed improvements* ***will not adversely impact adjacent or downstream properties****.*





Ground and surface water flow pattern after the development.

The existing drainage pattern map was provided in the environmental assessment report for reference. Comparing the two indicates that there will be no changes to wetland hydrology or to the uniformity of feeding the wetland edge. In the diagram above, the darker blue arrows show groundwater flow, while the light blue arrows indicate surface flow.

- *As documented in detail by Trinkaus Engineering, LLC, the proposed stormwater management system does not demonstrate compliance with the Connecticut DEEP 2024 Stormwater Quality Manual with respect to infiltration testing, pretreatment, and pollutant removal performance. These deficiencies increase the risk of adverse water quality and hydrologic impacts to downgradient wetlands.*

As certified by the project engineer ACE, *based on their calculated runoff depths, field-observed infiltration rates, and pollutant removal expectations outlined in the CT DEEP 2024 Guidelines for Soil Erosion and Sediment Control (Chapter 11) and the 2024 Connecticut Stormwater Manual, the proposed infiltration gallery systems are expected to provide greater than 99 percent pollutant removal and are consistent with CT DEEP post-construction stormwater management objectives.*

The effectiveness of this system is enhanced by the existing gentle slope and the length of water travel between the infiltrators (discharge areas) and the wetland. The front infiltrator is situated 253 feet away, while the southern one is 145 feet from the wetland edge. According to the Connecticut DEEP 2024 Stormwater Quality Manual, the minimum required distance between an infiltration system and a wetland or surface water body is only 50 feet. For comparison, the required distance to the reservoir is 200 feet, which shows the project design is very conservative.

The proposed plan shows three oil/grit separators that will provide pre-treatment for captured stormwater runoff from the driveway and parking area. These measures will remove sediment and sediment-borne pollutions, including coarse-grained material, free oil and grease, debris, and floating trash. After pre-treatment, the runoff will be directed to the in-ground infiltration units and further filtered through the soil enriched with microbes.

Two oil/grid separators will be installed in the underground parking area. The separate pollutants will be discharged directly to the sewer line.

Loamy sand found at the site is an effective medium for pollutant removal, particularly used in bioretention systems, due to its balance of high hydraulic

conductivity and sufficient retention time, boosting filtration and sorption. The proposed southern infiltration system will be located within the loamy sand soil horizon.
The rate of pollution removal in loamy sand shows:

- Heavy Metals (Cu, Zn, Cd, Pb): Highly effective, with removal efficiencies often exceeding 80%.
- Nutrients (Nitrogen/Phosphorus): Removal is good for total nitrogen.
- Microplastics: Sand filters can remove over 99% of microplastic mixtures (up to 25–30 µm).
- Petrochemicals/Hydrocarbons: Sandy soils, including loamy sand, allow for high removal rates (often >92%) of hydrocarbons (e.g., benzene, toluene).

The above-mentioned qualities will help with stormwater renovation.

Unlike bogs, which are oligotrophic ecosystems characterized by extremely low nutrient levels, red maple swamps and meadows are generally considered mesotrophic to eutrophic. The ones occurring at the site are mesotrophic due to groundwater seepage, accumulated organic material, and alluvial deposits, which supply nutrients and minerals. These systems are more flexible in terms of nutrient uptake. As stated by Mr. Logan in his response regarding 37 Hartford Ave in Ganby on February 12, 2024, *wetlands differ greatly in their sensitivity to nutrient inputs. At this specific site, the area is a swamp forest, and the proposed treated septic discharge can be expected to accelerate growth and increase biomass production, which is a positive, not an adverse impact.* The above conclusion supports adding nutrients to the wetland as beneficial.

- *Alteration of watershed-scale flow paths is **likely** to result in both increased saturation in some portions of the downgradient wetland and reduced groundwater contribution in others. Either outcome represents a physical alteration of wetland hydrology and constitutes a **likely** adverse impact under Inland Wetlands regulations.*

This statement does not provide any quantifiable evidence that the impact will take

place. Under the CT General Statutes, the Woodbridge Wetland Regulations, and court cases, a wetlands commission can consider only evidence demonstrating that the proposed activities will have a **substantial adverse impact on an existing function of a wetland**. ***Likely*** impacts that are not supported by solid evidence and science cannot be treated as established facts or used as the primary basis for decisions

The project area is located within the Race Brook Watershed. This watershed extends through Woodbridge and Orange, covering hundreds, if not thousands, of acres. The proposed 2.4-acre site development would not *alter watershed-scale flow paths.* REMA is concerned about *saturation in some portions of the downgradient wetland and reduced groundwater contribution in others*. The concern lacks a solid basis: gravity drives the water downhill, but soil porosity causes it to spread into a fan-shaped plume. Therefore, when stormwater runoff collected in the in-ground infiltration unit begins to infiltrate into the ground, the flow on the slope will no longer be confined to a narrow underground channel. Instead, it will move through the porous soil, spreading out as it travels downslope. In addition, the gravel bed installed beneath the building's slab will act as a giant level spreader. For more details, see the diagram of surface and groundwater movement after the development. The proposed measures will ensure there is no impact on wetland hydrology and hydrogeology.

- *Errors and omissions in soil descriptions, geologic interpretation, vegetation identification, and wetland functional assessment methodology.*

Several of the items are addressed in the revised report.

1. *Wetland delineation errors.*

Two wetland flags were relocated as requested by Martin Brogie, LEPO (MBI).

2. *Stormwater quality and quantity.*

Stormwater quantity has been addressed above, including the mechanisms and patterns of the groundwater movements. Stormwater quality will improve with the proposed change to the land use of this area. Currently, farmed land exposes the

downslope area to nutrient-rich runoff that flows into the wetland. The pesticides, herbicides, and synthetic fertilizers used regularly are being carried directly into wetlands and watercourses without any renovation. These applications often contain hazardous elements such as heavy metals (cadmium, lead, arsenic, chromium, nickel), chlorine-based compounds (organochlorines), phosphorus-based organophosphates, and PFAS (per- and polyfluoroalkyl substances), widely found in pesticides/herbicides. These chemicals accumulate in soil, water, and human tissue.

Per the 2024 CT Stormwater Quality Manual, Stormwater infiltration systems are most suitable for *soils with infiltration rates of 0.3 inch per hour. These soils generally correspond to Natural Resources Conservation Service Hydrologic Soil Group (HSG) A and B.* Soils found within the construction envelope are Agawam fine sandy loam series, classified as hydrologic soil group B. Agawam soil is highly effective for water filtration due to its well-drained, coarse-loamy, and sandy composition, which allows for moderate-to-rapid permeability. Forming in outwash terraces, this soil type has a structure that efficiently moves water while providing sufficient retention time for physical filtration.

The proposed stormwater management system designed for the development will remove more than 99% of suspended solids. The water-borne pollution will be filtered by the soil, which provides a natural filter enriched with clay and microbial activity. Sandy loam soils tested in the field showed hydraulic conductivity ranging from 2.94 to 4.53 in/hr on the slope leading to the wetland. This natural filter removes water pollution (sediments, metals, and bacteria) through physical filtration and chemical adsorption over a travel distance of more than 100 feet.

The 100-foot buffer between the proposed development and the protected wetland area will be planted with a dense native meadow. Such a vegetative filter strip is highly effective at removing nonpoint source pollution from surface water runoff, typically providing a balanced, high-performance, long-term water quality treatment zone that often exceeds 85% removal for many pollutants. The gently sloping area between the development and the wetland will encourage slow runoff movement through the vegetative strip, which can achieve 50% to 80% removal of Nitrogen and

Phosphorus. The effectiveness of pesticide and herbicide removal by vegetative strips often exceeds 90%, and certain pathogens are removed by more than 60%. https://www.epa.gov/system/files/documents/2021-11/bmp-vegetated-filter-strip.pdf

*In addition, conditions downgradient of the proposed infiltration galleries—within both the upland review area and the wetland—were not characterized in the Environmental Assessment, despite their relevance to **potential** hydrologic and water quality impacts.*

This statement is an unquantified claim provided without any proof or evidence of such impact. "**Potential**" is not based on facts.

The 100-foot upland review area will be vegetated with a native meadow mix that will grow densely between the developed area and the protected wetland. A portion of this meadow had already been successfully installed. To provide a physical buffer between the wetland and human activities, a line of trees and shrubs will be installed along the ROW edge, permanently protecting not only the wetland but also a portion of the buffer.

The wetland area closest to the development site was described in the report under the southern and northern areas.

5.2 Soil Characteristics and Subsurface Conditions

The glacial meltout till soils underlying the site are not underlain by gneiss, as stated, but by the Wepawaug Schist formation, consisting of medium to finegrained schist or phyllite (see Figure B, attached).

While the Wepawaug is primarily a schist or phyllite (composed of quartz, muscovite, plagioclase, and biotite), it contains granitic/gneissic intrusions in the region. The Wepawaug Schist in the Woodbridge, CT area is strongly associated with felsic igneous intrusions and neighboring gneissic units, formed primarily during the

Paleozoic Acadian orogeny. https://www.usgs.gov/publications/bedrock-geology-mount-carmel-and-southington-quadrangles-connecticut#:~:text=Intrusives%20that%20gave%20rise%20to,Haven%20Arkose%20of%20the%20Newark

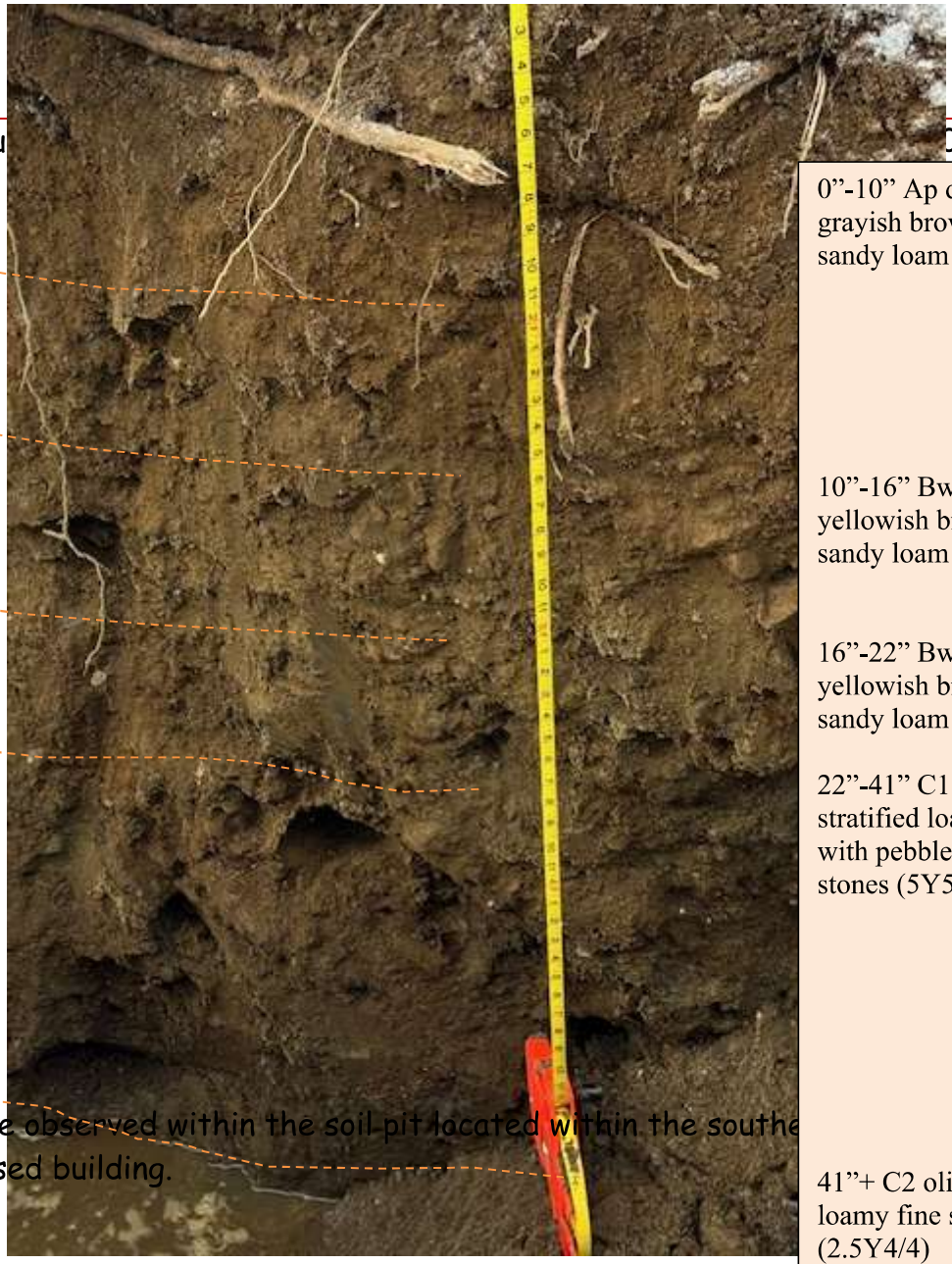
Deep soil pits excavated at both lower corners of the building revealed metamorphic rocks with varying degrees of metamorphism. Shale was found at the top, with slate, phyllite, and mica schist in the deeper portions. The ledge formation was soft and easily broken by the excavator. The glaciofluvial outwash contained rounded stones and pebbles consisting of gneiss, granite, and pegmatite. The Agawam soil series was found over the outwash.

Key soil characteristics relevant to impact analysis include not only permeability, but also water storage capacity—strongly influenced by depth to restrictive layers—and the suitability of soils for pollutant attenuation, including microbial denitrification. The resolution of soils mapping presented in the Environmental Assessment is too coarse to support these evaluations.

This paragraph is unclear. The soil water storage capacity is determined by texture, structure, porosity, pH, and organic matter content. The depth to restrictive layer has nothing to do with it. In determining groundwater movement, the most important parameter is hydraulic conductivity, which is the soil's ability to transmit water. It is unclear what the last sentence implies: *too coarse to support these evaluations*.

Two deep holes were excavated at each lower corner of the building to determine the upland soil type. The excavation was conducted during the snow cover and freezing temperatures. The soil in these locations was described as belonging to the Agawam series. The Agawam soil series is a well-drained soil occurring on outwash terraces. The parent materials consist of course-loamy eolian deposits overlying sandy and gravelly glaciofluvial deposits derived from gneiss and/or granite, schist, and/or phyllite. The depth to the groundwater table exceeds eighty inches up the slope, but the soil pit below shows it at 60 inches.

The measu 0".



0”-10” Ap dark grayish brown fine sandy loam (10YR4/2)

10”-16” Bw1 dark yellowish brown fine sandy loam (10YR4/4)

16”-22” Bw2 dark yellowish brown fine sandy loam (10YR4/4)

22”-41” C1 olive stratified loamy sand with pebbles and stones (5Y5/3)

41”+ C2 olive brown loamy fine sand (2.5Y4/4)
65” + ledge (shale, slate, phyllite, and mica schist)
60” groundwater table

Soil profile observed within the soil pit located within the southe
the proposed building.

Agawam soil is characterized as being very strongly acid to slight drained, coarse-loamy soil commonly found on outwash terraces, generally ranging from very strongly acid in upper layers to strongly acid throughout the subsoil. Soil absorbs and holds nutrients through a process called cation exchange — where negatively charged soil particles (especially clay and organic matter) attract and hold

positively charged nutrient ions like: Calcium (Ca^{2+}), Magnesium (Mg^{2+}), Potassium (K^{+}), and Ammonium (NH^{+}).

Agawam sandy loam soils have lower nutrient-holding capacity because of their coarse texture; at the same time, the nutrient availability is reduced due to low pH. This is why plants often show deficiencies in Ca, Mg, K, and P. The wetland soils are also between strongly acidic and moderately acidic; therefore, increased nutrients will not change their nutrient-holding capacity, and the nutrient availability will remain low.

The Environmental Assessment states that hardpan "underlined" (sic) the wetland soils at varying depths. If stormwater infiltration results in increased recharge near this restrictive layer, the water table in the off-site downgradient wetland may rise. Sustained increases in water table elevation would stress or kill trees adapted to seasonal saturation at greater depths and would adversely affect tree regeneration by prolonging saturation at or near the soil surface.

There is no evidence that the proposed development will cause flooding in the wetland area. As stated above, no additional water will be added to the system. Runoff from the area of impervious surface will be collected and released to the wetland through groundwater. During the flood event, the peak runoff will be alleviated, which will moderate the impact.

Even though the wetland hydroperiod will not change, the wetland area can sustain additional moisture without any visible change in vegetative cover. The wetland area slopes and drains efficiently towards the tributary of the Race Brook. A red maple swamp located near the wetland edges supports plant assembly adapted to prolonged flooding during the wet season. Due to site clearing within the ROW area, the narrow forested strips are more exposed to sunlight and moisture loss. Additional wetness would help to restore the original moisture regime of these areas. The meadow is located within the flood zone; therefore, flooding is something the plants are accustomed to.

5.3 Wetland Habitat Downgradient of Stormwater Discharge

The Environmental Assessment does not include a focused evaluation of the southwestern portion of the wetland system located directly downgradient of the proposed stormwater discharges.

This area is described in the report, and additional plant species were added to the revised description. It is important to keep in mind that this area is located outside the property boundary. This area contains a 40-foot-wide wooded strip, surrounded by a lawn to the west and a highly disturbed, degraded wetland area situated within the ROW. Therefore, the habitat functions of this strip are limited. Recently, the woody plants grown along the forested edge of the ROW were cleared, making the forest even narrower.

Hydrology within the off-site wetland is driven by both surface runoff and, critically, shallow groundwater flows that maintain seasonally saturated conditions. Introduction of a large building footprint and associated impervious surfaces within the contributing watershed and groundwater-shed is likely to alter this hydrologic regime.

This statement lacks substantial evidence and is not consistent with the drainage analyses and design for this area.

*In areas downgradient of the proposed level spreaders, increased saturation is **likely** to result in tree stress and eventual mortality. Reduced transpiration following tree loss would further elevate groundwater levels, altering wetland morphology, hydrology, and vegetation structure. The Environmental Assessment does not evaluate the vulnerability of wetland vegetation to increased nutrient or pollutant concentrations associated with stormwater discharge. Wetlands adapted to lownutrient conditions are particularly sensitive to enrichment and may shift toward denser, less diverse vegetation assemblages.*

Again, this statement lacks substantial evidence; therefore, it cannot be admitted as professional testimony. **Likely** impact is not an impact that is documented and fact-

supported. The response to this concern has been addressed above.

6.0 Wetland Characteristic

6.1 Vegetation and Species Identification

The requested corrections were made to the report, and additional plants observed by REMA along the property line were added. The input is highly appreciated.

Wooded swamp is referred to as "woodland," a term with a specific technical meaning in Connecticut vegetation classification (<60% canopy cover). In addition, all listed woody species are described as "dominant," despite the U.S. Army Corps of Engineers definition of dominance as ≥20% cover.

The wooded area at the site is fragmented and less than 40 feet wide. Even though it features closed canopies (60-100% cover), the light reaching the ground is much greater due to the narrow stand. Forests are characterized as wilder, more deeply shaded, moisture-holding, and less open and penetrable than woodlands. It is hard to describe a fragmented stand of trees as a forest.

6.3 Invasive Plant Species and Disturbance Characterization.

Statements suggesting that the presence of invasive plants results in insufficient food resources for wildlife are overly generalized. Many invasive plant species provide pollen, nectar, and fruit resources and their foliage is utilized by generalist insect taxa.

REMA visited the vicinity of the site in winter under snow cover; therefore, the evaluation of invasive species after the fall mowing is not accurate. The presence of invasive species threatens plant diversity and degrades the wildlife habitat. Invasive plants often grow faster, reproduce more aggressively, or tolerate harsher conditions than native species. They can crowd out native plants by hogging sunlight, water, nutrients, and space. They reduce species richness by fast spreading, forming

dense, single-species stands. This lowers overall plant diversity and simplifies ecosystems that were once rich and varied.

View of the ROW from Rimmon Road.

The photograph above shows a view of the ROW from Rimmon Road, featuring Mugwort in the foreground and dense cover of Porcelain berries also climbing over the trees in the background.

Some invasive plants alter soil nutrients or release chemicals (allelopathy) that make it harder for native plants to grow, even after the invasive species is removed. Wildlife is also affected by invasive species in several ways:

1. Loss of food sources

Native animals often depend on specific native plants for food. When those plants disappear, animals may struggle to find suitable nutrition—even if the invasive plants look lush.

2. Habitat degradation
Invasive species can change the physical structure of habitats. For example, invasive grasses may increase fire frequency, or invasive shrubs may block open spaces needed by certain animals.
3. Disrupting breeding and shelter
Birds, insects, and mammals that rely on native plants for nesting or shelter may find invasive plants unsuitable, leading to population declines.

6.4 Hydrology, Water Quality, and Biological Indicators.

Although not addressed in the applicant's report, REMA field observations did not identify evidence of rank or luxuriant vegetative growth typically associated with nutrient-enriched wetlands. This observation is consistent with surrounding land uses and suggests that existing water quality is relatively high, with low nutrient concentrations in the Race Brook tributary, Race Brook itself, and associated pools and drainageways within very poorly drained wetland areas.

This statement is based on a suggestion, not on substantial evidence based on water testing or proper plant evaluation. REMA fails to disclose when the field investigation was done and what was covered. The methodology is also lacking. Wintertime with snow cover is not conducive to the proper evaluation of vegetative cover. Again, the statement is not supported by substantial evidence.

Wetlands supported by low-nutrient conditions often sustain a higher proportion of less common plant and invertebrate species that are poorly tolerant of nutrient enrichment. As a result, these wetlands are particularly vulnerable to adverse impacts from inadequately treated stormwater inputs downgradient of development.

No soil testing for nutrient content was done by REMA. This statement is not supported by site-specific data. Also, REMA did not conduct a vegetative study at

the site. Therefore, the above statements, using REMA's own words, rely on *conclusory statements that are not supported by site-specific data.*

This concern has been addressed above.

7.0 Assessment of Wetland Functions and Values.

In discussing flood storage and amphibian use, the Environmental Assessment references seasonally flooded areas associated with Race Brook and its tributary and alludes to amphibian breeding and metamorphosis. These observations raise a reasonable potential for vernal pool-type habitat within portions of the on-site and immediately adjacent off-site wetland system.

There is no potential for a vernal pool habitat at the site. All types of wetlands were disclosed. REMA had not performed a vernal pool assessment; therefore, this statement is unsupported by site-specific data and misleading. Race Brook is not located on the property.

Furthermore, several stated rationales do not align with Highway Methodology guidance. For example, "aesthetic value" is reduced primarily due to invasive plant presence, despite standard aesthetic rationales emphasizing vegetation structure, seasonal color, and contrast between high elements (trees) and low expanses (open water, meadow). The assessment also does not address scenic vistas across meadow habitat with forest backdrop, which can contribute substantially to perceived aesthetic value. More broadly, the report does not provide ratings for the full set of wetland functions/values (e.g., absent, present/secondary, or principal) and omits recreational value. Human use values are characterized as "not applicable," although there may be legal public access via the utility right-of-way corridor.

The aesthetics REMA seeks to express overlook the fact that the wetland area is degraded by invasive species. The impact is illustrated below. The beauty is in the eye of the beholder, but most may struggle to describe the view below as a "scenic vista."

View of the ROW from Rimmon Road.

The recreational values of the wetland area are none. There is no public access to the site; in fact, access is impossible due to dense stands of invasive vines and multiflora rose. REMA's statement uses the word "may be". Again, far from the factual evidence.

The Wetland Function-Value Evaluation Form is provided below.

COMCLUSIONS

Based on the deficiencies outlined above, REMA concludes that the Inland Wetlands application for the proposed development at 27 Beecher Road is incomplete and does not provide a sufficient technical basis to support a finding of no adverse impact to

regulated wetlands and watercourses. In addition, the available evidence indicates that the proposed development ***has the potential to cause significant adverse impacts*** *to wetland hydrology, water quality, and habitat functions.*

Section 7 of the Woodbridge Inland Wetland Regulations specifies application requirements. The application checklist is included under section 7.6 a-g and 7.5 a-n. This application includes all items on the above checklist; therefore, the submitted application is complete. The engineering and environmental project analyses had demonstrated that there will be no impact on the wetland located more than 100 feet from the proposed site improvement. The evidence provided and the field study support these findings. The potential for a significant adverse impact on wetland hydrology, water quality, and habitat claimed by REMA is not supported by substantial evidence and/or field-collected data; therefore, it should not be considered.

PROJECT ALTERNATIVE

One of the application requirements is that the applicant provide an alternative site design. If the proposed development is not approved, the owner will expand the farming operation, including the wetland areas. The farming activities had already been presented to the Wetland Commission and deemed non-regulated uses. Section 4.2 a defines grazing, farming, nurseries, gardening, and harvesting of crops as permitted activities in inland wetlands as of right. The alternative plan shows planned farm activities to accommodate a goat farm and commercial vegetable growing.

Wetland Function-Value Evaluation Form

Total area of wetland 1.27ac Human made? n/a Is wetland part of a wildlife corridor? yes or a "habitat island"? n/a

Adjacent land use farmland, single-family development, commercial development, meadow, and forest Distance to nearest roadway or other development 150'

Dominant wetland systems present meadow/shrub-scrub Contiguous undeveloped buffer zone present no

Is the wetland a separate hydraulic system? no If not, where does the wetland lie in the drainage basin? flood plain

How many tributaries contribute to the wetland? one Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. 27 Beecher Road, Woodbridge, CT

Latitude 41 20 07N Longitude 73 00 20W

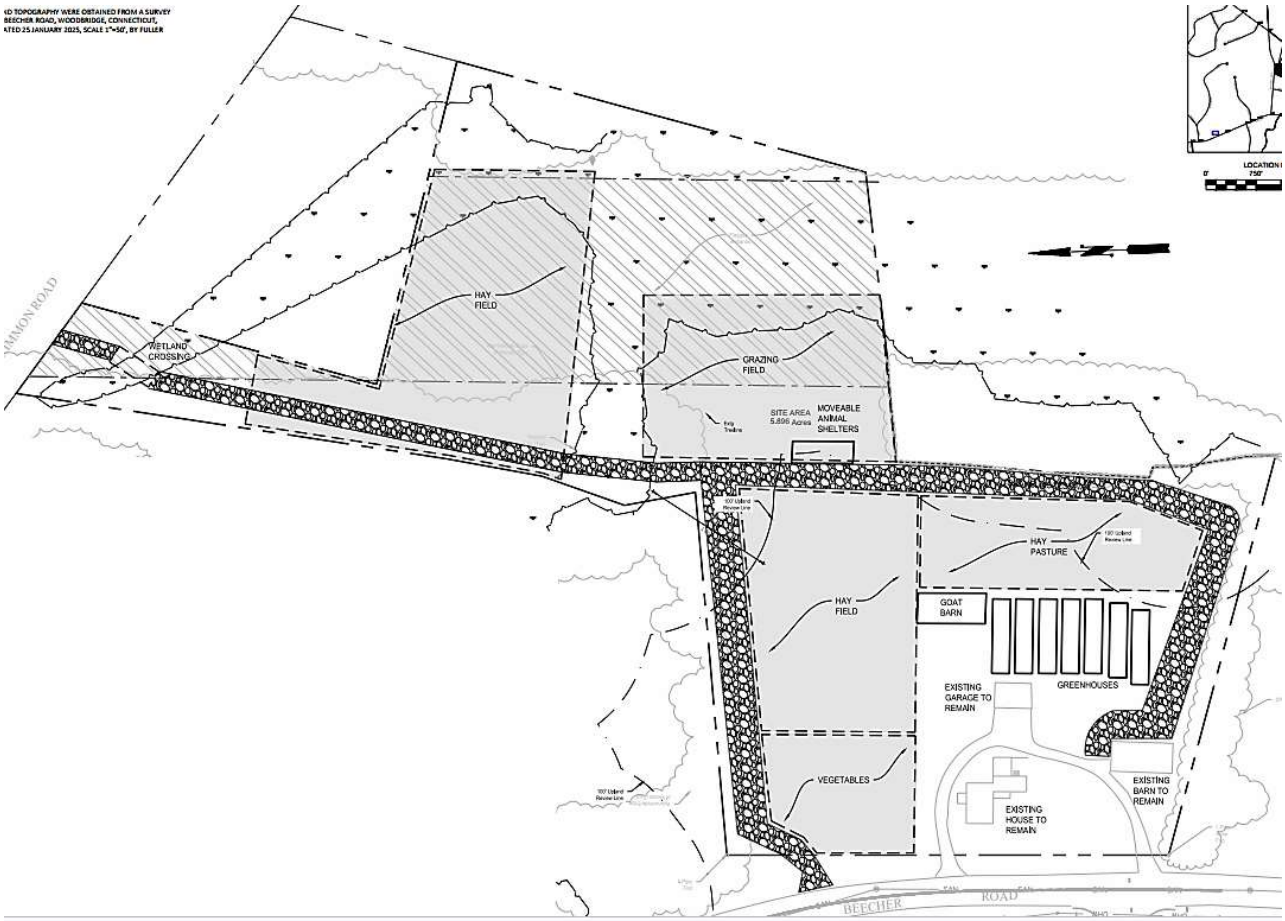
Prepared by: A. Moch Date 2/7/2026

Wetland Impact:
Type clering and soil disturbance ROW Area 0.82ac

Evaluation based on:
Office ____ Field X

Corps manual wetland delineation completed? Y____ N X

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	X	4,7,13,15	X	mainly discharge
Floodflow Alteration	X	56,8,9,10,13,14,18	X	high capacity
Fish and Shellfish Habitat	X	4,5,8,10,14,16,17		
Sediment/Toxicant Retention	X	3,4,8,10,12,16	X	
Nutrient Removal	X	3,4,5,7,8,9,10,11,13,14	X	
Production Export	X	1,2,4,5,7,11,12,13	X	
Sediment/Shoreline Stabilization	X	4,7,9,12,13,15		dense meadow /shrub-scrub
Wildlife Habitat	X	2,6,7,8,13,16,17,19		used as a corridor
Recreation		n/a		
Educational/Scientific Value		n/a		
Uniqueness/Heritage	X	2,4,7,22		
Visual Quality/Aesthetics		n/a		
ES Endangered Species Habitat		n/a		
Other		n/a		



Proposed alternative site use/improvements.

The alternative use of this property would be to continue and expand the farming operation to make it profitable. The proposed activities will include growing vegetables on a commercial scale in open fields and in all-season greenhouses. The goat farm will fill the rest of the area. The main animal enclosure will be located within the southeastern portion of the property. The grazing field partially within the wetland area will be used as a rotational area. Hay fields will grow the food to be stored for the winter feed. The gavel access ways will be installed to connect different areas of the farm and allow easy access to Rimmon Road with two wetland/stream crossings. An animal shelter and a barn will be erected to house the goats. The proposed animal enclosure and vegetable area will be fenced in.

Proposed 100-unit residential development vs. farming

Residential	Farming
General impacts	

• Activities located 100 feet from the wetland area, maintaining a naturally vegetated buffer.
• No changes to the wetland vegetation, natural buffer protected and restored.
• No soil disturbance.
	• Goats are aggressive grazers and browsers.
	• Overgrazing near and within the wetlands removes native plants that:
	  ○ Stabilize soil
	  ○ Filter pollutants
	  ○ Provide wildlife habitat
	• Loss of vegetation increases erosion and sediment runoff into wetlands/watercourses.
	• Water extraction and drainage manipulation can change the wetland

Soil compaction	

• Temporary soil disturbance outside of the wetland/URA during the construction phase will be fully controlled by the use of professionally designed soil erosion and sediment control measures.
• No long-term soil disturbance.
• No reduction or changes to the water infiltration rates.
	• Goat hooves compact soil.
	• Compacted soil reduces:
	  ○ Water infiltration
	  ○ Natural groundwater recharge
	• Increased runoff carries sediments and nutrients into wetlands.

Nutrient pollution

• Stormwater management addressing pollutant removal and more than 100 feet distance for the groundwater flow through the soil before discharging into the wetland • Not a significant source of nutrients	• Goat manure, fertilizers for the vegetable areas, and hay contain nitrogen and phosphorus. • When washed into wetlands, it can cause: • Eutrophication (excess nutrients) • Algal blooms • Oxygen depletion • Reduced biodiversity

Pathogen and toxin pollution

• Limited sources, eliminated before reaching the wetland via the proposed stormwater renovation system.	• Animal waste can introduce bacteria (e.g., E. coli) into the wetland. This affects wildlife and potentially human water supplies. • pesticides are toxic to aquatic organisms • pesticides bioaccumulate in food chains

Habitat Disturbance

• None within the wetland. • The wetland will be supported by a restored 100-foot natural buffer.	• Grazing crop fields can damage nesting areas for birds and other wildlife. • Trampling destroys fragile wetland edges. • Hay monoculture impacts the plant diversity and wildlife's food sources

Compared with these two land uses, the proposed 100-unit residential development will be much better for the wetland. The development will preserve the natural buffer and the wetland areas intact. Farming, on the other hand, will cause pollution, destruction of wetland fauna and flora, contamination of ground and surface water, and soil erosion.

MITIGATION MEASURES

The proposed mitigation measures include the restoration of the 100-foot wetland buffer area. The buffer will be seeded with native meadow mix and restored with meadow. The edge of the ROW will be planted with a line of shrubs and trees to provide a separation between the protected wetland/wetland buffer area and the human activities, such as noise and light pollution. For more information, please see the submitted wetland buffer restoration plan.

Aleksandra Moch
Environmental Consultant
cell: 203 550 9373
aleksandra_moch@yahoo.com