Kristine Sullivan

From: Marguerite Dillaway (via Google Docs) <marguerite.dillaway@gmail.com>
Sent: Wednesday, January 21, 2026 3:03 PM
To: Kristine Sullivan
Subject: EXTERNAL: Inland Wetlands Jan. 21, 2026
Attachments: Inland Wetlands Jan. 21, 2026.pdf

Marguerite Dillaway attached a document

Marguerite Dillaway (marguerite.dillaway@gmail.com) has attached the following document: Learn more

Inland Wetlands Jan. 21, 2026

Inland Wetlands Jan. 21, 2026

I am Walden Dillaway, 1196 Johnson Road, Woodbridge

The applicant recently purchased a property at 27 Beecher Road - which, together with Peter Morgan's property and our own comprise a corridor between Beecher and Johnson Road, which represents the largest unspoiled land in the area. There is a branch of the Racebrook River paralleling each road.

As you drive Ansonia Road west, these two branches lie in a deep valley. The valley is more than a mile wide and extends from Bishops Pond, (overlooking the Parkway), downward, and then up again to the top of the Ansonia hill (by the Woodbridge Club.)

We believe this corridor at the bottom of that valley should not be further developed.

When you study the map, you see that the applicant's four-story building, will border the west branch of the Racebrook River. This branch originates IN Woodbridge from several tributaries as far west as Peck Hill Road. The East branch originates north of Center Road.

From there, the two branches reach Water Company property in southern most Woodbridge. They then join at the Racebrook Preserve in Orange. From there, they meet our Wepawaug River south of the Boy Scout Camp and on to downtown Milford and Long Island Sound.

Although most of us here tonight are drinking from well water, all of our school children from Grades K-12 are drinking directly from the Water Company property as well.

As you consider this application tonight, we know from the map that Woodbridge has a special responsibility, as we alone are the point of origin of the entire Racebrook watershed. It all starts here.

Walden Dillaway

Kristine Sullivan

From: Kristy Laydon <kmlaydon@gmail.com>
Sent: Wednesday, January 21, 2026 2:58 PM
To: Kristine Sullivan
Subject: EXTERNAL: Written opposition to 27 Beecher Road, proposed 4-story, 100 unit apartment building

To the Members of the Woodbridge Inland Wetlands Commission,

I am a resident of the Town of Woodbridge and I am writing to submit these comments for the record regarding the proposed apartment development at 27 Beecher Road. While I am unable to attend the public hearing in person, I respectfully ask that this letter be included in your deliberations.

I am opposed to this application because of my concerns about the potential impact the proposed development may have on the wetlands and water resources associated with the property.

As a resident, I value Woodbridge's commitment to protecting its natural resources. The wetlands on and near this site play an important role in managing stormwater, reducing flooding, maintaining water quality, and supporting local wildlife. These wetlands are part of a natural system that helps protect surrounding areas and contributes to the overall environmental health of our town.

My concern is that the scale and intensity of the proposed apartment building will place undue stress on these wetlands. Increased impervious surfaces and altered drainage patterns are likely to increase stormwater runoff, erosion, and sedimentation, especially during heavy rain events. Over time, these changes can degrade wetland function even if the wetlands themselves are not directly filled or built upon.

I am also concerned about indirect impacts, such as changes to water flow and water quality, which may not be immediately visible but can gradually harm wetlands. From a resident's perspective, once these natural systems are disturbed, they are extremely difficult to restore, and the loss is permanent.

I understand that mitigation measures may be proposed, but I am not convinced that engineered solutions can fully replace the natural functions of existing wetlands. I believe it is important for the Commission to carefully consider whether this project can be carried out without causing long-term harm to these sensitive areas.

For these reasons, I respectfully ask the Inland Wetlands Commission to deny, or significantly limit, the proposed application in order to protect the wetlands and water resources of the Town of Woodbridge.

Thank you for your time, consideration, and service to our community.

Respectfully submitted,

Kristy M. Laydon

Kristine Sullivan

From: Blake, Bonnie <bonnie.blake@yale.edu>
Sent: Wednesday, January 21, 2026 2:46 PM
To: Kristine Sullivan
Subject: EXTERNAL: IWA review of 27 Beecher Rd. application

Attention: Inland Wetland Agency Members:
Date: January 21, 2026
From: Bonnie Blake, 64 Beecher Road, Woodbridge
Re: 27 Beecher Road Application

Greetings:

I write to you as a life-long resident of Woodbridge, concerned neighbor, and Beecher Road School supporter.

My family moved to Woodbridge on Rice Road in 1953 for the school system. I graduated from Amity High School, and after moving around a bit, came back to Woodbridge when I wanted to start a family in 1978. I purchased the cheapest house in town, built in 1764 on Beecher Road and barely habitable. Despite having no experience with historic homes, I had to quickly learn how to shingle a roof and repair leaking pipes and have spent the last 47 years carefully renovating this home so that at some future date I might pass it along to someone else who will love and protect her and support our small town.

I greatly appreciate the work the IWA does to protect the valuable wetlands in our town. Wetlands across our Earth and in our town continue to shrink, and since about 40% of plant and animal species exist in wetlands, this is a problem shared by everyone on our planet – including our Woodbridge community.
Obvious concerns are flood control as Racebrook runs near this property which is directly across from our only grade school, and protection of wells and septic, as most residents do not have public utilities.

Thus, I ask that you carefully consider this project at 27 Beecher Road that includes construction within the mandatory 100' buffer zone from designated wetlands. I understand that our Town experts have noted wetlands far closer than indicated in the application.

Thank you,
Bonnie Blake

Kristine Sullivan

From: Robert Rosasco <robert3.rosasco@gmail.com>
Sent: Wednesday, January 21, 2026 2:45 PM
To: Kristine Sullivan
Subject: EXTERNAL: Public Comment - IWA Public Hearing 1-21-26
Attachments: IWA Public Comment 1-21-26 Rosasco Westward Road.docx

Dear Kris:

Happy New Year. Please find my written comments for tonight's public hearing. If these comments are misdirected to you and should go to another, please let me know and please forward to the appropriate person.

Be well,
Rob Rosasco

Dear Inland Wetlands Agency:

The following offers comment with regard to the application to develop the residential property at 27 Beecher Road into a 100-unit apartment complex. In section 1.1 of the Town Inland Wetlands and Watercourse Regulations, the following is stated, with **emphasis**:

> **It is, therefore, the purpose of these regulations to protect the citizens of the state by making provisions for the protection, preservation, maintenance and use of the inland wetlands and watercourses by minimizing their disturbance and pollution**; maintaining and improving water quality in accordance with the highest standards set by federal, state or local authority; preventing damage from erosion, turbidity or siltation; preventing loss of fish and other beneficial aquatic organisms, wildlife and vegetation and the destruction of the natural habitats thereof; **deterring and inhibiting the danger of flood and pollution; protecting the quality of wetlands and watercourses for their conservation,** economic, aesthetic, recreational and other public and private uses and values; and **protecting the state's potable fresh water supplies from the dangers of drought, overdraft, pollution, misuse and mismanagement by providing an orderly process to balance the need for the economic growth of the state and the use of its land with the need to protect its environment and ecology in order to forever guarantee to the people of the state, the safety of such natural resources for their benefit and enjoyment and for the benefit and enjoyment of generations yet unborn.**

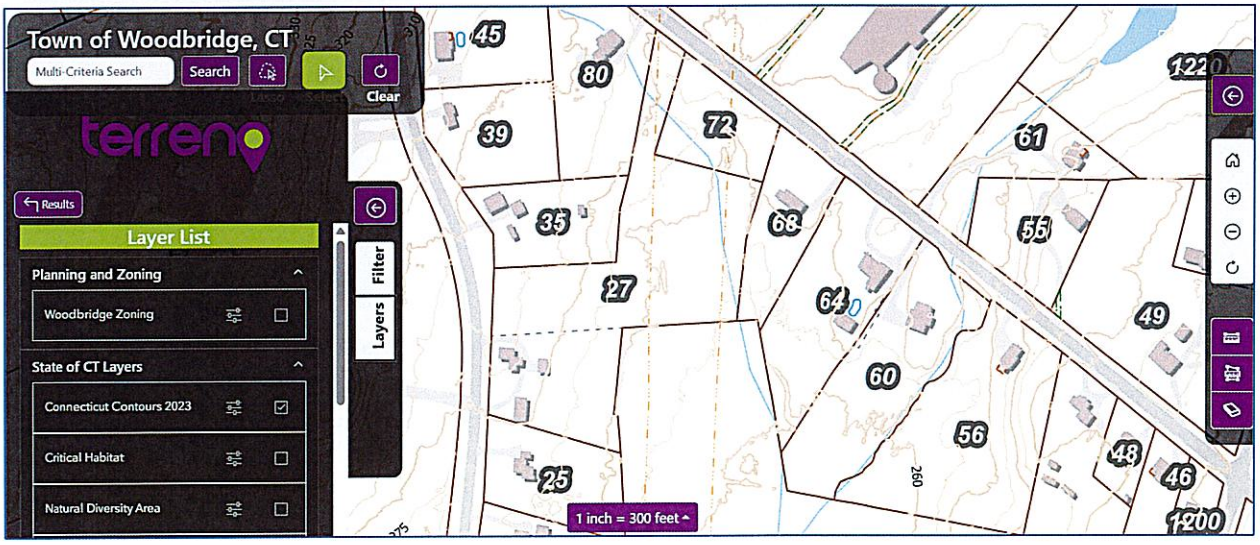
It is thus the charge of this Agency to ensure wetlands and watershed are protected for the benefit of Woodbridge residents and those of the state of Connecticut, for generations to come. Woodbridge has significant wetlands and watershed benefitting residents and our neighbors. The ecology within and adjacent to wetlands/watershed, along with the watershed, is critical for drinking water. Ensuring the protection of watershed and wetlands should be a tantamount priority for our community.

The State of Connecticut has noted the criticality of protecting inland wetlands and watercourses for, *inter alia*, the protection of drinking water. See the Town Inland Wetlands and Watercourses Regulations, pp. 33-34, with **emphasis** added:

> **Sec. 22a-36.** Inland wetlands and watercourses. Legislative finding. **The inland wetlands and watercourses of the state of Connecticut are an indispensable and irreplaceable but fragile natural resource** with which the citizens of the state have been endowed. **The wetlands and watercourses are an interrelated web of nature essential to an adequate supply of surface and underground water; to hydrological stability and control of flooding and erosion; to the recharging and purification of groundwater; and to the existence of many forms of animal, aquatic and plant life.** Many inland wetlands and watercourses have been destroyed or are in danger of destruction because of unregulated use by reason of the deposition, filling or removal of material, the diversion or obstruction of water flow, the erection of structures and other uses, all of which have despoiled, polluted and eliminated wetlands and watercourses. Such unregulated activity has had, and will

> continue to have, a significant, adverse impact on the environment and ecology of the state of Connecticut and has and will continue to imperil the quality of the environment thus adversely affecting the ecological, scenic, historic and recreational values and benefits of the state for its citizens now and forever more. The preservation and protection of the wetlands and watercourses from random, unnecessary, undesirable and unregulated uses, disturbance or destruction is in the public interest and is essential to the health, welfare and safety of the citizens of the state.

With the preface of the charge of this Agency and overlying policy of the State of Connecticut, I turn to the residential site at 27 Beecher Road. At first blush, there appears to be wetlands, watercourses, and flood zones on this site as shown at https://terrenogis.com/desktop/home.html?viewer=cama/woodbridgect, suggesting prime farmland soils (green), poorly drained and very poorly drained soils (dark blue), flood zones (hashed), and an active watercourse (see second map):



The location of the wetland soils may be broader than what has been mapped, as reported by Martin Brogie, Inc. (see https://www.woodbridgect.org/DocumentCenter/View/7378/27-Beecher-Road---Wetland-Impact-Review-by-IWA-Consultant-Martin-Brogie-Inc?bidId= at p. 2, fourth bullet) with **emphasis** added:

> **MBI observed several red flags along the delineated wetland line.** All of the flags indicated on the plan were not observed in the field and flag numbers were largely illegible. Using a hand auger and keying off of flags that were present, MBI conducted a series of borings upgradient of the wetland line. In the area of apparent Wetland Flag #20, we noted that topography was very flat, with no changes in microtopography that typically (but not always) provide visual clues for changes in soil type. Approximately 15 feet upgradient of the flag, we encountered a gleyed B horizon with 15-25% high chroma mottles. (see photos) These observations are consistent with poorly drained soils. **As such, it is our opinion that the wetland flag is too low in the landscape and the line should be moved further west.** Similarly, in the northeast area of the proposed development, upgradient of the installed silt fence and approximately 15-20 feet upgradient of apparent Wetland Flags #'s 4 and 5, we encountered similar soil conditions, consistent with poorly drained soils**. As such, it is our opinion that the wetland flag is too low in the landscape and the line should be moved further southwest.** The wetland test point completed by MBI in this area was upgradient of the silt fence suggesting that a portion of the wetland has been cleared in this area. (See Photos). **MBI suggests that the flag locations should be remarked in the field using survey and that the line be reevaluated by the project Soil Scientist. MBI did not evaluate the entire wetland line.**

Based on the review by Martin Brogie, Inc., it appears that wetland soils may reach beyond where the current mapping is, and I encourage this Agency to conduct further investigation to confirm the same with appropriate experts. Knowing where wetlands and wetland soils stop and start will be informative as to whether development of the site is appropriate or detrimental to the ecology and current or future drinking water supply, which as noted by the State of Connecticut *supra*, is "*an interrelated web*".

With regard to ecological impact, it appears that alterations to the site have occurred to the property - trees have been cut down extending line of sight from Beecher Road to beyond the power lines at the rear of the property. A large pile of boulders is on the north side of the lot. I encourage this Agency to consider whether or not further activities need to be halted until a proper analysis can be conducted to ensure the environment is appropriately protected. SS. 4.2-4.3 of the Town Inland Wetlands and Watercourses Regulations require permitting where wetlands and watercourse activities may include "*clear cutting, clearing, or grading, or any other alteration or use of a wetland or watercourse not specifically permitted by this section or otherwise defined as a regulated activity by these regulations shall require a permit from the Agency*" (see s. 4.3, Town Inland Wetlands and Watercourse Regulations)

and thus the Agency can confirm if a permit at this time, previously granted or not, is appropriate (see s. 11.9 and 14.5, Town Inland Wetlands and Watercourses Regulations).

In review of at least some of the application materials provided by the applicant/developer of the 27 Beecher Road site, stormwater management and grading plans are provided. I would ask this Agency to review those thoughtfully as water runoff can adversely impact the ecology of, e.g., the prime farmland soils, wetlands, and watershed.

Finally, I encourage this Agency to utilize resources available to you under the Town Inland Wetlands and Watercourses Regulations (see, e.g., Section 10, the Town Inland Wetlands and Watercourses Regulations), such as confer with the Conservation Commission and residents who have pertinent expertise in conservation and the environment, including scientists, engineers and lawyers, residents who have knowledge of the land through ownership or use of adjacent lots, residents who have otherwise retained experts, those who may have information and knowledge regarding the ecological impacts of development on wetlands, and/or residents who are otherwise willing to help you in confirming the same.

Thanks,

Rob Rosasco

6 Westward Road

Kristine Sullivan

From: Angel Abuin <angelabuin@me.com>
Sent: Wednesday, January 21, 2026 1:23 PM
To: Kristine Sullivan
Subject: EXTERNAL: 27 Beecher Road Concern

Good afternoon, Ms. Sullivan, my name is Angel Abuin, and my family and I reside at 45 Beecher Road. We have called Woodbridge our home for the last 12 years. Writing to you to voice my concern over 27 Beecher Road development. I don't envy your position because you are probably fielding many emails regarding the proposal, each with varying degree of tone and concern. We are all concerned about the future of Woodbridge. Many of us, including my family intend to make this our home for the long term and hopefully a home for our kids kids. I am not opposed to development. I understand that Woodbridge needs to adapt and conform with the changing landscape of need and opportunity, but this type of development that is creeping in and plays on the fringes of the law and only serves as monetary reward for the developer. There are some glaring issues with the plans presented and these concerns will be presented tonight. While our issues are valid, my concern is the years after the build, the day to day human behavior that will adversely affect our town, i.e, garbage, damage of the building from a storm, 100+ cars and protective systems that might fail over time and are not repaired in timely fashion. Again, I understand that the committee reviews the plans based on the law, but I hope the committee will also review it based on the potential after affects. The issues that appear long after a decision is made, that is what concerns me and my family.

Thank you for your time.

Best,
Angel Abuin

Kristine Sullivan

From: Kristine Sullivan <ksullivan@woodbridgect.org> on behalf of ksullivan@woodbridgect.org
Sent: Wednesday, January 21, 2026 12:29 PM
To: 'Derek Iwaszkiewicz'
Subject: FW: EXTERNAL: Inland Wetlands Agency - 27 Beecher Road Application
Attachments: Woodbridge Wetlands.pdf

Dear Derek,
This was just received from Attorney Shansky.
Sincerely,
Kristine Sullivan, Land Use Analyst

Marjorie Shansky
Attorney at Law
61 East Grand Avenue
New Haven, Connecticut
(203) 671-8887

January 21, 2026

Via email to: KSULLIVAN@woodbridgect.org

Mr. Robert Blythe, Chairman
Inland Wetlands Agency
Town of Woodbridge
11 Meetinghouse Lane
Woodbridge, Connecticut 06525

Re: 27 Beecher Road Inland Wetlands and Watercourses Application
File Number: H-818

Dear Chairman Blythe and Members of the Woodbridge Inland Wetlands Agency:

This office represents concerned neighbors to the proposed development of a 100-unit apartment building at 27 Beecher Road. In connection therewith, Verified Petitions to Intervene in the Public Hearing have been filed with the Agency and experts have been retained who will share their findings.

I have reviewed the Application in its several parts, the reports of REMA Ecological Services, LLC, and Trinkaus Engineering, LLC, and the peer reports including the Wetland Impact Review from Martin Brogie, Inc. and the memo from Criscuolo Engineering, LLC. Critically, both the REMA Report and Mr. Brogie discuss significant issues relating to the accuracy of the wetland delineation which is the foundation from which all other information flows. Based on the review by two independent soil scientists, it is submitted that the Application before the Agency fails to comply with baseline regulatory requirements and is not positioned for review and approval at this time. This is not the only point of concern as the Trinkaus, Logan, and Brogie letters describe, but defines the immediate need for reformation and correction.

It is established law that the burden of proving compliance with the statutory requirements for a wetlands permit is on the applicant. Strong v. Conservation Commission, 226 Conn. 227, 229 (1993). The failure of an Applicant to supply information required by the Regulations and requested by the Commission is a valid basis for denying an Application. Unistar Properties, LLC v. Conservation & Inland Wetlands Comm'n of Town of Putnam, 293 Conn. 93 (2009).

"A commission is not at liberty to ignore its existing regulations and to treat them as invalid." (citations omitted). Fedus v. Zoning & Planning Comm'n of Colchester, 112 Conn. App. 844, 850 (2009).

Section 11.2 of the Regulations governing the decision process and permit provides, in pertinent part: "An application deemed incomplete by the Agency shall be withdrawn by the applicant or denied by the Agency."

We urge the Agency to hold the Applicant to its burden of establishing its eligibility for the permit it seeks by reviewing and reforming the wetland delineation as may be appropriate and subsequent to which the proposed regulated activity may be again reviewed for likely adverse impacts. We will participate this evening and look forward to returning to the Agency upon that review.

Very truly yours,

Marjorie Shansky

Kristine Sullivan

From: Kathleen E Mills <k.brennan77@gmail.com>
Sent: Wednesday, January 21, 2026 10:33 AM
To: Kristine Sullivan
Subject: EXTERNAL: Comment for Wetlands Public Hearing

Good morning,

Please see my comments regarding 27 Beecher Road. Thank you.

My name is Kathleen Mills. I am a resident of Woodbridge, residing at 1189 Johnson Road.

In the legislation findings of Connecticut State Statutes, Chapter 440, section 22a-36, it states, "The inland wetlands and watercourses of the state of Connecticut are an indispensable and irreplaceable but fragile natural resource with which the citizens of the state have been endowed. The wetlands and watercourses are an interrelated web of nature essential to an adequate supply of surface and underground water; to hydrological stability and control of flooding and erosion; to the recharging and purification of groundwater; and to the existence of many forms of animal, aquatic and plant life. Many inland wetlands and watercourses have been destroyed or are in danger of destruction because of unregulated use by reason of the deposition, filling or removal of material, the diversion or obstruction of water flow, the erection of structures and other uses, all of which have despoiled, polluted and eliminated wetlands and watercourses. Such unregulated activity has had, and will continue to have, a significant, adverse impact on the environment and ecology of the state of Connecticut and has and will continue to imperil the quality of the environment thus adversely affecting the ecological, scenic, historic and recreational values and benefits of the state for its citizens now and forever more."

It is my hope that the Inland Wetlands Agency will uphold the state statutes and work diligently to protect the inland wetlands that would be affected by 27 Beecher Road. In addition to the above, the construction that is proposed would have a dire effect on water run-off for other properties and wetlands nearby, as well as a risk to the quality of groundwater, upon which most residents of Woodbridge depend. Surely there is another property or different structure that would not incur such damage upon the local environment. In addition, the proposed construction abuts land and property that is home to diverse wildlife and serves to feed, nourish, and protect those animals that live and travel through that area.

--
The Rev. Dr. Kathleen E. Mills

Pastor
Holy Trinity Lutheran Church

406 White Plains Road
Trumbull, CT 06611

k.brennan77@gmail.com
207-213-3576

Kristine Sullivan

From: 刘松念 <liusongnian@gmail.com>
Sent: Wednesday, January 21, 2026 9:59 AM
To: Kristine Sullivan
Subject: EXTERNAL: Submission of Technical Appendix and Mercury Risk Materials for Official Record – 27 Beecher Road
Attachments: 0121 Technical Appendix_Songnian Liu.pdf; 0121_Hg-MeHg cycle_Songnian Liu.pdf; 0121 Public Comments_Songnian Liu.pdf

Dear Commissioners and Agency Staff,

My name is Songnian Liu, and I live at 47 Hallsey Lane. I am writing to formally submit the following materials to the Woodbridge Inland / Wetlands Agency, for inclusion in the official record for the application concerning the proposed development at 27 Beecher Road:

1. A Technical Appendix synthesizing peer-reviewed scientific literature on mercury and methylmercury cycling.
2. A visual flow diagram illustrating the site-specific mercury–methylmercury (Hg–MeHg) cycle, with each pathway supported by published studies
3. My written public comments on mercury-related environmental and public-health risks.

These materials are directly relevant to the Commission's statutory responsibilities under Connecticut General Statutes §§22a-36 and 22a-41 to evaluate whether a regulated activity may cause pollution, impairment, or destruction of wetlands or watercourses, including cumulative and off-site impacts.

I respectfully request that:

• All three documents be entered into the official administrative record for this application
• The documents be retained in full without redaction
• The documents be made publicly accessible as part of the meeting minutes or hearing file, consistent with Connecticut public records and open-meeting requirements

These submissions are intended to ensure that the Commission has a complete scientific and technical basis for evaluating mercury and methylmercury risks associated with this site's forest–wetland–groundwater–stream system, and to preserve procedural transparency for all interested parties.

Please confirm receipt of these materials and advise whether any additional formatting or submission steps are required.

Thank you for your attention to this matter and for your service to the Town of Woodbridge.

Sincerely,
Songnian Liu, Ph.D.
47 Hallsey Lane, Woodbridge, CT, 06525
508-314-8199
liusongnian@gmail.com

Dear Woodbridge Inland / Wetlands Agency,

My name is Songnian Liu. I hold a Ph.D. in Environmental Microbiology, and my research focused on how mercury moves and changes in natural environments.

I oppose the proposed development at 27 Beecher Road due to unaddressed mercury and methylmercury risks, especially as they relate to the wetland on this property.

Tonight, I want to be very clear:
This concern is not speculative. It is based on well-established science and site conditions that match known mercury-risk mechanisms. Evaluating this risk is required under Connecticut General Statutes §§22a-36 and 22a-41.

1. This Site Has the Exact Conditions That Create Toxic Mercury

Decades of research show that mercury behaves in a predictable way. Here is one example:

- Mercury from the air settles onto forests
- Rain washes it into the wetlands
- Bacteria convert it into methylmercury, the most toxic form
- Methylmercury builds up in fish, wildlife, and people
- Mercury does not break down. Once it's there, it stays

The developer's own reports describe this site as:

- Having poorly and very poorly drained wetland soils
- Being seasonally saturated with shallow groundwater
- Containing organic-rich forest, meadow, and shrub wetlands
- Being fed by groundwater springs
- Having a perennial stream flowing through it

These are exactly the environmental conditions that allow wetlands to turn mercury into methylmercury.

Despite this:

- No mercury was tested in soil, sediment, surface water, or groundwater.
- No evaluation of methylmercury formation was done
- No biological sampling of wildlife or microbes was performed.

Without baseline mercury data, it is not scientifically defensible to conclude this site is safe.

2. Mercury does not stay on site, and it is exported downstream

The wetland delineation confirms that a perennial stream flows through and exits the site.

That means this wetland is not isolated, and it can export mercury.

Once methylmercury leaves the wetland:

- It enters downstream streams and rivers
- It bioaccumulates in fish and aquatic insects
- It transfers into terrestrial food webs, impacting insects, spiders, birds, and small mammals.
- Mercury can also be converted into methylmercury again in nearby soils

So far, no downstream mercury transport or impact assessment has been conducted.

3. This is a groundwater discharge zone, and the drinking-water risk was ignored

The developer's reports repeatedly state that the wetland is sustained by groundwater-fed springs and seasonally saturated soils.

That means this wetland is connected to the shallow aquifer. It is the same aquifer that supplies nearby private drinking-water wells.

Yet there are:

- No monitoring wells,
- No groundwater chemistry data,
- No assessment of mercury migration into potable water.

From a public-health standpoint, this is indefensible.

4. Request to the Commission

As a scientist who once studied mercury cycling for a living, I cannot overstate how dangerous this oversight is. I respectfully request that the Commission require:

- Analytical baseline mercury testing in soils, sediments, surface water, and groundwater,
- Seasonal groundwater monitoring to establish flow direction and connectivity,
- A comprehensive assessment of methylmercury formation and downstream impacts
- A long-term monitoring plan to protect ecosystems and private wells

To support this request, I have submitted **three documents to the official record**:

- **A Technical Appendix**
- **A visual Hg–MeHg cycle flow diagram**
- My **written public comments**

I respectfully request that these materials be **retained in full and made publicly accessible from the meeting minutes**.

Without these data, the mercury-related environmental and public-health risks associated with this project cannot be evaluated in a scientifically or legally sufficient manner.

Thank you for your consideration.

Sincerely,

Songnian Liu

Mercury (Hg) and Methylmercury (MeHg) Cycling at 27 Beecher Road: Scientific Evidence, Regulatory Context, and Environmental Risk Assessment

Prepared for:
Woodbridge Inland / Wetlands Agency
Prepared by:
Songnian Liu, Ph.D
Date:
January 21, 2026

Executive Summary

The proposed residential development at 27 Beecher Road is located adjacent to a forested wetland with perennial stream connectivity within the Race Brook watershed. Extensive peer-reviewed research and federal government assessments demonstrate that forest–wetland–stream systems function as integrated **networks for mercury (Hg) retention, methylation, and export**.

Elemental and inorganic mercury (Hg) deposited from the atmosphere accumulates in forest soils and wetlands, where microbial processes convert it into methylmercury (MeHg), a potent neurotoxin that bioaccumulates through aquatic and terrestrial food webs. The U.S. Geological Survey (USGS) and U.S. Environmental Protection Agency (EPA) recognize wetlands as key environments for mercury transformation and exposure risk.

This appendix synthesizes peer-reviewed evidence documenting the complete Hg–MeHg cycling pathway relevant to the site and evaluates how land disturbance and hydrologic alterations associated with development may increase environmental and public health risks.

1.0 Mercury and Methylmercury in Forest Ecosystems

1.1 Forest Food Web Bioaccumulation

Tsui et al. (2019) demonstrated that methylmercury biomagnifies efficiently in forest-floor food webs, with trophic magnification comparable to that in aquatic systems. Higher-trophic invertebrates (e.g., predatory spiders and centipedes) accumulated elevated MeHg concentrations, serving as exposure pathways to birds and mammals.

Implication for 27 Beecher Road:
Forested areas adjacent to the wetland can support MeHg bioaccumulation independent of aquatic exposure, creating terrestrial exposure pathways.

1.2 Forest Soils and Litter as Mercury Reservoirs

Hall and St. Louis (2004) found that total mercury (Hg) and methylmercury (MeHg) accumulate in decomposing plant litter and soils, particularly in flood-affected landscapes. Flood-deposited organic material exhibited MeHg concentrations several-fold higher than unflooded litter, indicating in-situ production and retention.

Implication:
Floodplain and wetland-adjacent soils at the site may contain stored Hg and MeHg that can be mobilized by physical disturbance.

2.0 Transport of Mercury from Uplands to Wetlands

2.1 Upland Runoff as a Mercury Source

St. Louis et al. (1996) documented that wetland-dominated catchments are net sources of MeHg to downstream waters. Upland soils supply inorganic Hg to wetlands, where hydrologic and biogeochemical conditions regulate methylation rates.

Implication:
Construction-related soil disturbance and runoff may increase Hg delivery to the wetland.

2.2 Wetlands as Mercury Methylation Zones

Branfireun et al. (1996) identified saturated wetland soils and groundwater upwelling zones as primary sites of mercury methylation, driven by anaerobic conditions, organic carbon availability, and microbial activity.

Implication:
Groundwater-fed wetlands at 27 Beecher Road exhibit physical characteristics associated with elevated methylation potential.

3.0 Groundwater Transport and Drinking-Water Risk

3.1 Subsurface Transport of Hg and MeHg

Branfireun and Roulet (1998) demonstrated that shallow groundwater flow can transport MeHg laterally beyond wetland boundaries. Krabbenhoft and Babiarz (1992) identified groundwater as an important pathway for mercury transport to surface waters.

Clarification (important):
While direct MeHg contamination of drinking-water wells is less common than surface-water exposure, **hydrologic connectivity between wetlands and shallow aquifers represents a plausible transport pathway**, particularly under disturbed conditions.

Implication:
Where private wells draw from shallow aquifers connected to wetland systems, groundwater monitoring is warranted.

4.0 Wetland-to-Stream Export and Food Web Transfer

4.1 Export to Streams

Selvendiran et al. (2008) demonstrated that wetlands export both total mercury and methylmercury to streams via surface runoff and groundwater discharge. Wetland-dominated catchments yielded higher MeHg fluxes than upland systems.

Implication:
The perennial stream at the site provides a pathway for mercury transport into Race Brook.

4.2 Aquatic–Terrestrial Linkages

Cristol et al. (2008) and Tsui et al. (2012) showed that emergent aquatic insects transfer MeHg from streams into terrestrial food webs, exposing birds, bats, spiders, and other predators.

Implication:
Mercury produced in the wetland may re-enter surrounding forests through biological pathways.

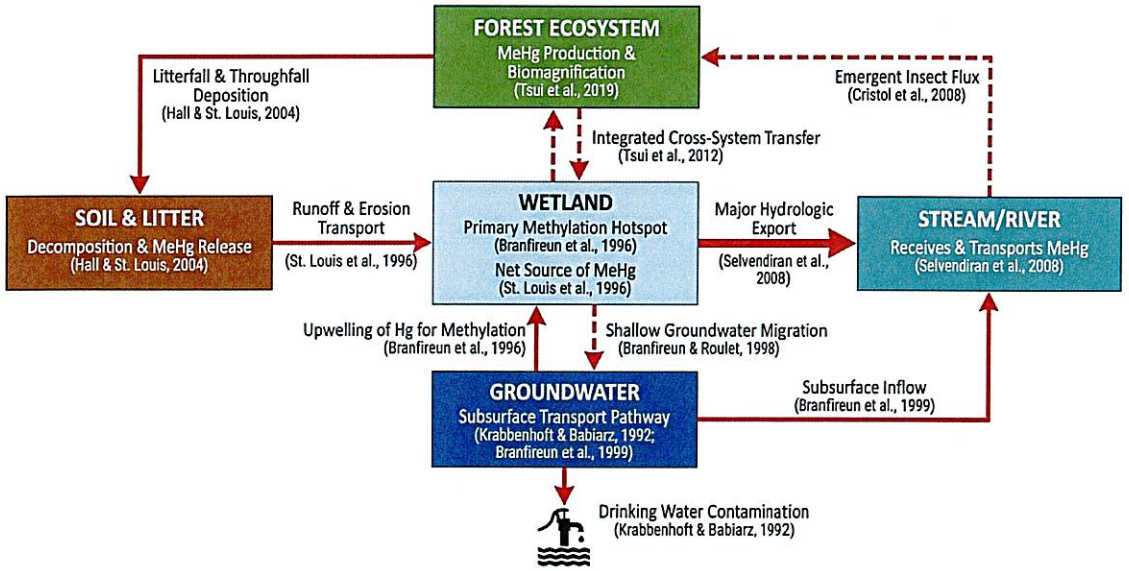
5.0 Integrated Mercury Cycling Relevant to 27 Beecher Road

The literature supports a inter-connected Hg–MeHg cycle:

1. Atmospheric Hg deposition to forests
2. Hg storage in soils and litter
3. Transport to wetlands via runoff
4. Microbial methylation to MeHg
5. Groundwater and surface-water transport
6. Stream export
7. Biological transfer via insects
8. Terrestrial bioaccumulation

A visual diagram of the Hg-MeHg cycle and each corresponding peer-reviewed referenceis attached here for the record.

The Methylmercury (MeHg) Contamination Cycle at 27 Beecher Road: An Integrated Ecological & Human Health Risk
This graphic illustrates the scientifically documented pathways of MeHg movement between environmental compartments at the 27 Beecher Road site. Each arrow is supported by peer-reviewed literature.



Development-related stressors (e.g., soil disturbance, increased impervious cover, altered hydrology) may amplify multiple stages of this cycle.

6.0 Regulatory and Government Context

- **USGS** identifies wetlands as environments with elevated mercury methylation and bioaccumulation potential.
- **EPA** classifies mercury as a persistent, bioaccumulative toxin regulated under the Clean Water Act.
- **CGS §22a-36 and §22a-41** require evaluation of long-term impacts to wetlands and water quality, including pollutant transport.

7.0 Recommended Pre-Development Assessments

Based on the established scientific risk profile for this site, the following targeted studies are strongly recommended prior to any approval or commencement of site work:

Assessment Component	Objective
Baseline Contaminant Profiling	Determine existing total Hg and MeHg concentrations in representative soil, wetland sediment, surface water, and shallow groundwater samples.
Seasonal Hydrologic Monitoring	Evaluate the degree and seasonality of hydrologic connectivity between the wetland, the stream, and the adjacent shallow aquifer utilized by private wells.
Downstream Risk Assessment	Sample Hg and MeHg concentrations in nearby river/stream to establish baseline flux and potential downstream exposure risk.
Methylation Potential Analysis	Conduct a qualitative assessment (e.g., using biogeochemical indicators) to estimate the

Assessment Component	Objective
	intrinsic methylation potential of the wetland substrate.
Long-Term Monitoring Plan	Develop a structured, five-year post-construction monitoring plan to track potential changes in Hg/MeHg levels in water bodies and sentinel organisms.

8.0 References

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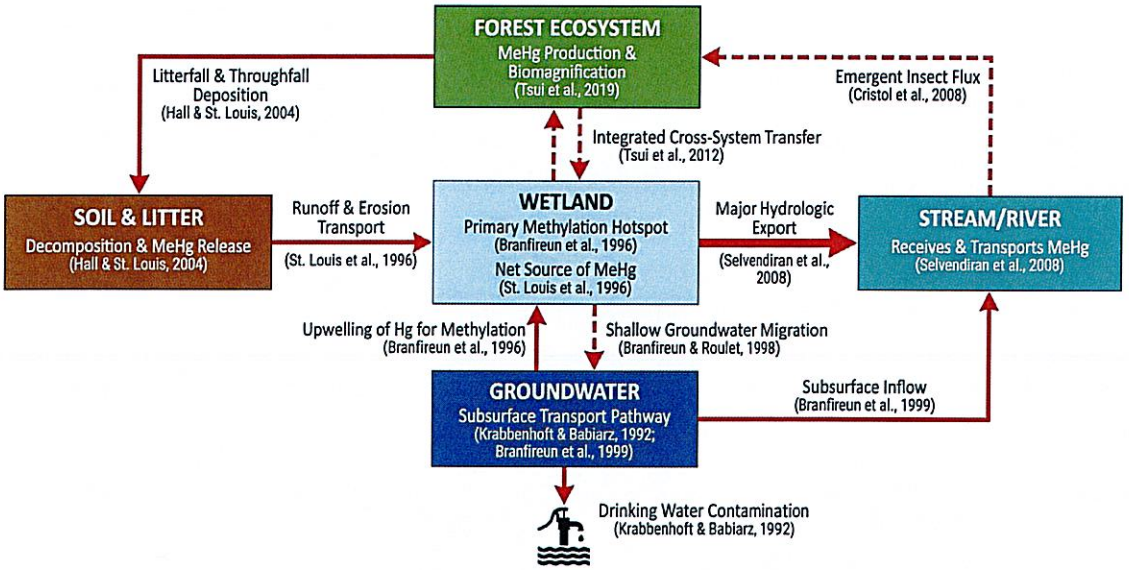


Kristine Sullivan

From: Peter Morgan <petertmorgan@hotmail.com>
Sent: Tuesday, January 20, 2026 8:49 PM
To: Kristine Sullivan
Subject: EXTERNAL: Photo 27 Beecher - evidence of clear cutting of trees in wetlands upland review area and/or wetlands
Attachments: Screenshot 2026-01-20 at 8.07.21 PM.png

Hi Kris -

Would you please add this e-mail to the record related to public comments on the 27 Beecher proposal to the inland wetlands committee?

Attached are two photographs. One is a google maps satellite image of part of the 27 Beecher Road property, showing the cluster of trees opposite the house from the road that are part of a several tree wide line of trees demarcated by the Connecticut Light and Power Right of Way. The other is a recent photograph from my property (52 Rimmon) showing the clear cutting of the portion of those trees on the 27 Beecher property (and I'm not sure whether any of that cutting extends onto my property — I was careful not to get close to the property line). In any case, the trees that were cut definitely appear to be in the wetlands upland review area and possibly even in wetlands (I guess pending more soil testing/analysis). I am providing this as evidence of a possible violation of Connecticut's Inland Wetlands and Watercourses Regulations (per 4.1(a), which does not protect clear cutting except for agricultural uses, per 4.3, which requires a permit to engage in clearing or clear-cutting, and per the definition of regulated activities that except for specific protected activities, any clearing within 100' of the wetlands is a regulated activity).

Outside of the hearing on the proposal, is it possible to also bring this to the attention of the committee as a potential violation that may need to be remedied? Or how would I do that?

thanks!
Peter

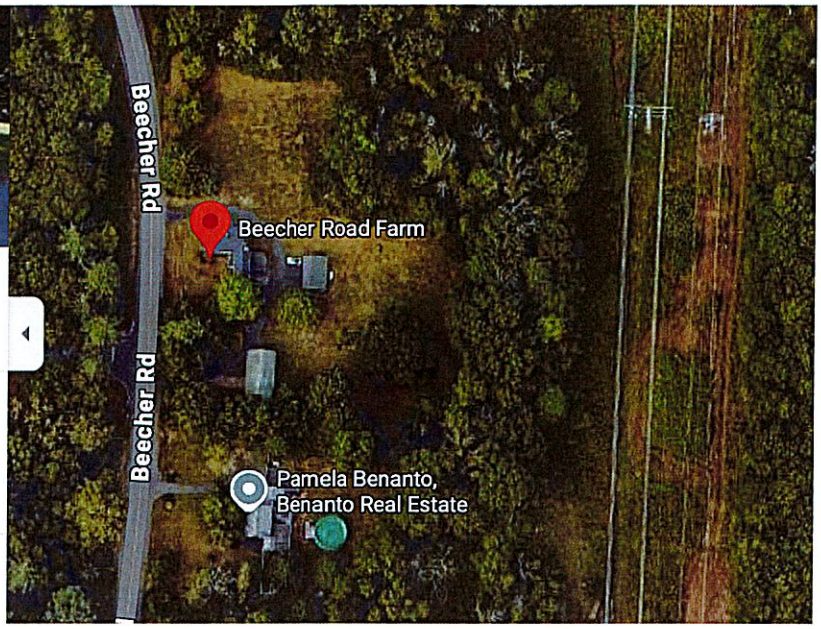
From: Peter Morgan <petertmorgan@hotmail.com>
Sent: Wednesday, January 21, 2026 1:10 AM
To: Peter Morgan <petertmorgan@hotmail.com>
Subject: Photo 27 Beecher

Beecher Road Farm

Farm

Directions | Save | Nearby | Send to phone | Share

27 Beecher Rd, Woodbridge, CT 06525



Kristine Sullivan

From: Lynne Drazen <lynnedrazen@gmail.com>
Sent: Monday, January 19, 2026 7:04 PM
To: Kristine Sullivan
Subject: EXTERNAL: Housing on Beecher Rd

Dear Kris,
I'm in Fl and can't attend the meeting on Wednesday for the "housing" I'm hearing about on Beecher Rd near Beecher Road School and my neighbors homes. I am completely opposed to this type of building. Our first selectman really needs to think about what the complexion of a suburban town is. We are not a city unless he's trying to turn it into New Haven. Our Governor seems to think any override of our zoning is open season. Affordable and lower rent/ ownership housing has a place, but not in the way our town officials are completely forgetting their citizens needs. You can't "plop" housing next to other residential homes. These people who live in that residential neighborhood have worked hard "on their own" to build or buy their homes. How dare this proposal jeopardizes these people.

Also the allowance of allowing developers to come into our towns and purchase homes to do as they please should be stopped. That is not fair market. We have had specific town zoning laws in place to protect our property from the state or developers to do as they please. Enough! If you keep this up, more people will no longer seek out our town. I'm very concerned that our present town officials will totally ruin our beloved town.
Sincerely,
Lynne Drazen

Kristine Sullivan

From: Chris Anton <chris@exposure.com>
Sent: Sunday, January 18, 2026 9:01 AM
To: Kristine Sullivan
Subject: EXTERNAL: Concerns over water runoff at 27 Beecher Road

Good morning Kris,
We are unable to attend the 1/21 Inland Wetlands committee meeting and would like the below to be entered into the public comments:

Dear Inland Wetlands Commission,
Regarding the proposed housing on 27 Beecher Road: We have serious concerns given the proximity of the proposed building to the adjacent wetlands. We are specifically concerned about runoff from parked vehicles that may negatively affect those wetlands. We urge the commission to thoroughly assess all potentials for adverse impacts prior to considering the proposed development. Thank you for your consideration.
-Chris Anton, Racebrook Road