

**INLAND WETLANDS COMMISSION
REGULAR MEETING
MINUTES**

July 27, 2022 @ 7:30 p.m.

Council Chambers, Newtown Municipal Center
3 Primrose Street, Newtown CT

These Minutes are subject to approval by the Inland Wetland Commission

Present: Sharon Salling, Craig Ferris, Mike McCabe, Scott Jackson, Suzanne Guidera

Staff Present: Steve Maguire, Senior Land Use Enforcement Officer, Dawn Fried, Clerk

Ms. Salling opened the meeting at 7:30 p.m.

PENDING APPLICATION

IW Application #21-16 by 19 Commerce Road, LLC, property located at 19 Commerce Road, to construct a self-storage facility with 5 buildings and 37,000+ sq. ft. of regulated activity including grading, filling and construction.

Mr. McCabe read the legal notice for the record.

Ms. Salling asked Mr. Maguire whether the applicant submitted the revised site plans. Mr. Maguire stated yes. The Commission had no further questions.

Mr. Ferris moved to **approve IW Application #21-16 by 19 Commerce Road, LLC, property located at 19 Commerce Road, to construct a self-storage facility with 5 buildings and 37,000+ sq. ft. of regulated activity including grading, filling and construction,** with standard conditions A, B, C, D, E, F, L & P.

The approved plans are: Site Improvements 19 Commerce Road LLC, 19 Commerce Road, Newtown, Connecticut dated revised July 11, 2022 and all supporting documents. Mr. McCabe seconded. All in favor.

PUBLIC HEARING

IW Application #22-14 by Farrell Building Company, property located at 90 Mt. Pleasant Road, to construct 11 Garden Apartment buildings, one clubhouse, and associated site improvements including driveways, parking and stormwater management.

Mr. McCabe read the legal notice for the record.

Ms. Salling gave an overview of the Public Hearing process.

Mr. Ferris moved to accept Patrick Napolitano as an Intervenor. Mr. Jackson seconded.

Ms. Salling – Aye

Mr. Jackson – Aye

Ms. Guidera – Nay

Mr. McCabe – Aye

Mr. Ferris – Aye

The motion passed 4 to 1 in favor of accepting Patrick Napolitano as an Intervenor.

Attorney Robert Hall, 43 Main Street, Newtown, represented the applicant. Atty. Hall gave an overview of the property and explained the property was previously approved for medical office buildings in 2018.

Atty. Hall submitted a document outlining three subjects; the approval of the application, the overview of the prior approval on the property and a request for the Commission to deny Patrick Napolitano's intervenor status. See attached document.

Atty. Hall submitted the following documents for the record. See attached.

1. The certified abutter mailers.
2. Copies of the 2018 approved plans
3. Resumes of JMC LLC Staff: James Ryan, Principal, Anthony Nester, Associate Principal, Paul Dumont, PE, Design Manager. James McManus, JMM Wetland Consulting Services, LLC.

Mr. James Ryan, RLA, Principal, and Mr. Paul Dumont, PE, Design Manager, both of JMC LLC, Armonk NY, represented the applicant. Mr. Ryan stated the applicant, Farrell Building Company, has newly constructed buildings located in Sandy Hook. Mr. Ryan stated the rental apartments are doing well.

Mr. Ryan along with Mr. Dumont highlighted a Power Point presentation. See attached.

Atty. Hall compared the approved application in 2018 with the current proposal. Atty. Hall asked the Commission to consider that the current proposal has significantly less impact on the wetlands compared to the approved 140-acre development four years ago.

Atty. Hall gave an overview of his memorandum titled "Memorandum in Support of Farrell Building Application", dated July 27, 2022, please see attached.

Atty. Hall submitted a 2018 site plan for the record from BL Companies. The site plan outlines the isolated pocket wetland, designations C1, C2, C3, C4, C5.

James McManus, CPSS, JMM Wetland Consulting Services, LLC, Newtown, CT, stated he originally delineated the property in the summer 2015. In 2018 another delineation was done by Davis Environmental. A report submitted by Davis Environmental, dated June 23, 2018, showed that Mr. McManus's old flags were used to delineate the wetlands. During Mr. McManus's site walk in the summer of 2015 he came across a small isolated wetland pocket, C-Series wetlands, which was not on the Davis Environment report. In March of 2022, Mr. McManus revisited the site to familiarize himself with the property and to update his records and photographs, which he added to the wetland

assessment report. Mr. McManus gave a detailed overview of the wetlands, the functions and values, and the erosion and control plan described in the Wetland/Assessment report dated April 28, 2022. See attached.

Mr. Hall reiterated Mr. McManus's findings and stated that this project will not have a significant adverse impact to the wetlands and it falls within the parameters of the previous approval. Mr. Hall asked the Commission to act favorably on the application.

Mr. McCabe asked to see additional information regarding the stormwater management plan. Mr. Dumont stated the stormwater management plan was submitted. He then gave a brief overview. Mr. McCabe noted there are no additional flows going into the wetlands but asked if there is a reduction of flow. Mr. Dumont stated yes there is a reduction of the rate of flow, but not a reduction in the volume. Mr. McCabe ask if the basins infiltrate. Mr. Dumont responded yes.

Ms. Salling has concerns that the reduced rates of flow will dry up up the wetland fingers. Mr. Dumont responded the water volumes are maintained but the rates are reduced. Ms. Salling asked Mr. McManus if he was satisfied that the effort has been made to preserve the wetland hydrology. Mr. McManus stated yes, the engineers are designing the project to release the same amount of volume. Mr. Ryan stated they are trying to design an environmentally sensitive property. It is a collaborative effort.

Mr. Ferris asked where the volumes of water go. Mr. Ryan responded its part of the infiltration system and will evaporate. Mr. Ferris suggested instead of using infiltration basins can they use recharging gallery stations. Mr. Dumont stated infiltration systems are a preferred method because of the advantage of the open air system. Also, it's easier to access and maintain the water quality treatment.

Mr. Ferris asked about water quality and how it will be handled with fertilizers. Mr. Ryan stated there will be a management treatment program in place. Mr. Ryan explained that Farrell maintains the common areas and are responsible, good neighbors who are environmentally sensitive and conscientious. Mr. Ryan will provide a report of the maintenance plan.

Ms. Guidera asked whether any considerations have been made to remove the invasives species in the wetlands to improve functionality. Mr. Ryan stated yes, they can develop a program. Mr. McManus stated the area is dominated by barberry. Ms. Guidera asked whether large trees will be taken down. Mr. Ryan stated yes, but very few.

Mr. McCabe asked where the roof-top runoff will go. Mr. Ryan stated directly into the stormwater system.

Mr. Maguire asked Mr. McManus whether he was confident that the pocket wetland he found was the only wetland and no other wetlands on the property were missed. Mr. McManus stated he did the best he could to get through the property. Yes he is confident.

Mr. Maguire asked whether the fingers of the wetlands are a result of erosion from the surface runoff or are seepage from the wetlands. Mr. McManus stated the erosion is more upslope towards the

eastern part of the property. Mr. Maguire asked whether they are confident the basins will adequately recharge the area and maintain the hydrology at the beginning of the fingers. Mr. McManus stated yes. Mr. Ryan stated the test pit results showed ground water discharge.

Mr. Maguire asked whether there is a spec sheet of the composition of the basin. Mr. Dumont stated yes the spec sheet details for the basin are in the landscaping plan. Mr. Maguire asked if the soils in the basin are stone-lined. Mr. Dumont responded no, it is not stone lined.

Mr. Maguire asked how the slopes of the basins, which lead to the wetlands, will be maintained. Mr. Ryan stated the slopes will not be a maintained lawn and will only be mowed once a year. Mr. Dumont stated a low maintenance seed mix will be used. Mr. Maguire asked whether it was possible to pull back the grading for additional buffering. Mr. Dumont responded no because the 3-to-1 slope would be too steep.

Mr. Maguire asked for an overview of the sediment and erosion plan and whether it will be done in phases. Mr. Dumont stated it is not a phased development. There will be a double row of silt fencing throughout the site, four temporary sediment basins during construction, temporary seeding and haying for stabilization, and the stormwater runoff will bypass the swale in order to divert upland flows and reduce run off.

Mr. Maguire asked whether extra fill will be used. Mr. Dumont stated no.

Mr. Ferris noticed an old flag during his site visit between the outfall and the sediment basin and he asked Mr. McManus to take a look at the area and explain the flag.

PUBLIC PARTICIPATION

Gary Tannenbaum, 36 Pond Brook Road – Mr. Tannenbaum is concerned with Pond Brook’s aquifer constantly decreasing because of failing infiltration systems. Mr. Tannenbaum stated that developers and the deeds of the land should require maintenance plans to assure its hydrodynamic separators and infiltration basins are maintained. Those reports should be submitted to the town. The comparison of the 2018 project and the current 2022 project should be ignored because in 2018 it was two separate parcels combined. Mr. Tannenbaum recommended garages under the apartments and 3-story buildings to reduce impervious surfaces. Mr. Tannenbaum stated no developer should infringe on other peoples’ land rights.

Michael Crisculo, 2 Pocono Road, spoke against the application, please see attached letter.

Mark D’Amico, 7 Tory Lane, submitted a “Verified Petition to Intervene” document. The Commission did not vote. Mr. D’Amico also submitted a document for the record, titled “Newtown Commons Potential Stream and Wetland Impacts”, dated July 18, 2022, please see attached. Mr. D’Amico spoke against the application, please see attached letter.

Ms. Guidera asked whether it was possible to clear the area by the wetland so it can be further assessed. Mr. McManus stated the wetland is tiny and the area is very dense. Mr. Ryan previously

tried to clear a path with a machete. Mr. Ryan will go back. Ms. Salling would also appreciate a clear path.

Mr. Ferris asked Mr. Ryan to describe the stormwater system process. Mr. Ryan will provide a narrative of the system for clarity. Mr. Maguire stated he would like a treatment train description.

Ms. Salling discussed a possible third party review. The Commission will review all of the information and make a decision at the next meeting.

The Commission agreed the Public Hearing will remain open.

APPROVAL OF MINUTES

Regular Meeting of July 13, 2022

The Commission found no substantive errors. Mr. Jackson moved to accept the minutes from July 13, 2022. Mr. Ferris seconded. The minutes from July 13, 2022 were approved.

OTHER BUSINESS

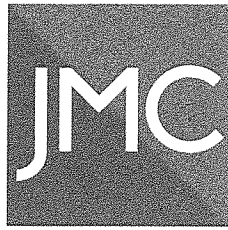
Mr. Maguire spoke about Kiana Maisonet, the newly hired Land Use Officer in the Land Use Agency.

ADJOURNMENT

With no additional business, Mr. Jackson moved to adjourn. Ms. Guidera seconded. All in favor. The Regular IWC Meeting of July 27, 2022 was adjourned at 9:27 pm.

Respectfully Submitted, Dawn Fried

IWC mtg
7-27-22
D.F.



James A. Ryan, RLA *Principal*

Mr. Ryan is a Principal of the firm and a Registered Landscape Architect with experience in site planning, landscape architecture, civil engineering and construction management with 34 years of experience providing site development services to a wide array of national retailers, builders, senior housing providers, institutions and municipalities.



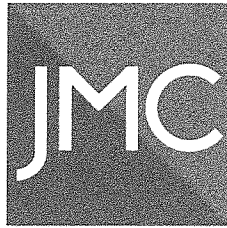
Since joining the firm in 1984, Mr. Ryan has been responsible for the supervision of zoning and environmental analyses, landscape design, site planning, site grading and utility design, cost estimating, and construction observation. He has also worked extensively on behalf of several municipalities as an environmental and land planning consultant and directs presentation of projects before approval agencies and community groups.

A 1980 graduate of the University of Rhode Island, Mr. Ryan holds a Bachelor's degree in Environmental Sciences.

He has completed advanced studies in civil engineering, master planning and sediment and erosion control. He is a member of the American Society of Landscape Architects, The Urban Land Institute and the International Council of Shopping Centers. He is a Registered Landscape Architect in New York, Connecticut, New Jersey, Rhode Island, Virginia, Maryland, Massachusetts and Pennsylvania. Mr. Ryan also currently serves the community of Newtown, Connecticut as a member of the Conservation Commission.

914.273.5225 | jryan@jmcpllc.com

IWC mtg.
7-27-22
D.F.



Anthony P. Nester, RLA *Associate Principal*

Mr. Nester is an Associate Principal of the firm and is a Registered Landscape Architect in New York and Connecticut with over 30 years experience in site planning, civil engineering, landscape architecture, hazardous waste, storage and environmental remediation.



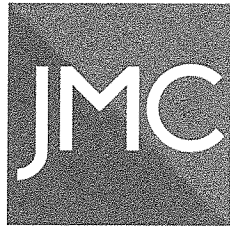
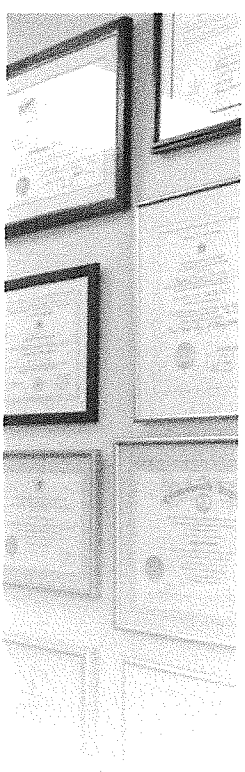
Since joining the firm in 1985, Mr. Nester's responsibilities include the supervision and conceptualization of site design and planning, site plan approval, civil engineering, construction documents, sediment and erosion control, sanitary sewer and water pump station design, drainage design, construction cost estimating, project management and quality control.

He has also completed several continuing education courses in landscape architectural design, healthcare garden design certification at the Chicago Botanical Gardens, handicap accessibility regulations, petroleum storage, construction administration, spill prevention controls and countermeasure (SPCC) planning at Rensselaer Polytechnic Institute, installation and removal of underground petroleum storage tanks at the University of Wisconsin and computational methods in stormwater design at Penn State.

Mr. Nester is a member of the American Society of Landscape Architects, CLARB, International Council of Shopping Centers, American Seniors Housing Association and the Orange County Partnership.

914.273.5225 | anester@jmcpllc.com

IWC mtg
7-27-22
D.F.



Paul Dumont, PE
Design Manager

Mr. Dumont is a Design Manager with the firm and a licensed Professional Engineer with experience in project permitting, civil engineering, site planning, environmental analysis, and construction related services.

Having joined the firm in 2015, his responsibilities include the supervision and design of site plans and construction documents including site layout, site grading, sanitary sewer design, stormwater management design, erosion & sediment control, and water supply and distribution systems. Mr. Dumont is also experienced in cost estimating and construction observation, as well as the preparation of feasibility studies, zoning analyses, and engineering reports. His skills also include public presentations and permitting of projects in various municipalities in Westchester and Putnam counties.

A 2015 graduate of Manhattan College, Mr. Dumont holds a Bachelor's Degree in Civil Engineering. He is a licensed Engineer in New York State, and is a member of the American Society of Civil Engineers.

914.273.5225 | pdumont@jmcpllc.com

+ vvl mtg
7-27-22
D.7.

PROFESSIONAL RESUME

James M. McManus, MS, CPSS

Principal Soil Scientist

EDUCATION: M.S., Plant and Soil Science, University of Connecticut, Storrs, CT
B.S., Agronomy (Soils), University of Connecticut, Storrs, CT

CERTIFICATIONS: (ARCPACS) Certified Professional Soil Scientist (CPSS #15226)
Registered Professional Soil Scientist, Society of Soil Scientists of Southern New England
OSHA HAZWOPER Certification Title 29 CFR 1910.120

EXPERIENCE: Mr. McManus is a Registered Certified Professional Soil Scientist (CPSS #15226) with primary expertise in wetland and hydric soil assessment and delineations. Mr. McManus has over 25 years professional experience and has conducted over 2,000 wetland delineations throughout New England as well as Alabama, Florida, Georgia, New York, New Jersey, Georgia, Minnesota and Tennessee.

Other areas of expertise include USACE wetland resource area determinations, wetland inventories and evaluations, reporting and permit assistance, vernal pool investigations, construction and erosion control monitoring, surface water quality sampling, as well as natural resource surveys utilizing a global positioning system (GPS).

Mr. McManus has conducted numerous natural resource surveys along proposed linear right-of-ways, which include natural gas pipelines overhead power lines, and fiber optic lines, many of which he was team leader. Responsibilities included wetland and ecological surveys and the identification of rare and endangered plant and animal species.

Mr. McManus performs wetland delineations throughout New England in accordance with local, state, and federal procedures. Mr. McManus has specific expertise in soil test pit descriptions to determine the morphology and suitability of soils for septic system design.

Mr. McManus has conducted hydric soil determinations on a number of sites and construction monitoring and sediment erosion inspections on various sites throughout Connecticut, New York, and Massachusetts. He has performed post-construction surface water quality sampling and report preparation from inlet and outlet structures associated with stormwater treatment systems at several retail development sites, and surface water and groundwater sampling on various golf courses.

Professional Resume: *(continued)*

James M. McManus, MS, CPSS

Principal Soil Scientist

PROFESSIONAL AFFILIATIONS:

New England Hydric Soil Technical Committee (NEHSTC)
American Registry of Certified Professionals in Agronomy, Crops, and
Soils (ARCPACS)
Society of Soil Scientists of Southern New England
Connecticut Association of Wetland Scientists (CAWS)
Association of Massachusetts Wetland Scientists (AMWS)
Soil Science Society of America (SSSA)
Soil & Water Conservation Society
International Erosion Control Association
Rotary International

WORKSHOPS & CONFERENCES:

Massachusetts-DEP Training Program for the new Bordering Vegetative
Wetland regulations (Soil Science Instructor, (1996).

Surficial Geologic Field Trip: Review soil and geologic setting along
various landscapes in eastern Massachusetts (Soil Science Instructor
11/00).

Soil Scientist of Southern New England Workshop: Soils of Litchfield
County Connecticut (8/02).

Sedimentation and Erosion Control Review Session. USDA. Natural
Resource Conservation Service and CPESC (Certified Professionals in
Erosion Control), Concord NH (10/01).

Tracking and Sign Workshop: A workshop to review and study various
types of tracks and sign in New England (10/99).

Mean Annual High Water Line Determination Workshop for MA-DEP
Riverfront Area Determinations. (10/00).

Mass-DEP and USGS Workshop: StreamStat and the MA-DEP
Riverfront Area Regulation updates (2/03).

PUBLICATIONS:

Fieldler, P.L., C. Duncan, K. Fetherston, J. Gaskin, G. Hollands, L. C.
Lee, J. Mason, J. McManus, W. L. Nutter, M. C. Rains, D. Schall and S.
Smyers. 1998. Development of a Draft Guidebook to HGM Functional
Assessments for Riverine Waters/Wetlands in Eastern Massachusetts.
Society of Wetland Scientists, 19th Annual Meeting, Anchorage Alaska,
June 8-12, 1998.

Professional Resume: *(continued)*

JAMES M. McMANUS, MS, CPSS

Principal Soil Scientist

WORK HISTORY:

2000 to present

JMM Wetland Consulting Services, LLC
Principal Soil Scientist, Owner

- Performs wetland and resource area delineations in accordance with State and Federal Statutes and guidelines.
- Performs resource inventories, including those of wetlands, watercourses, and vernal pool habitats.
- Conducts soil resource inventories and characterizations including High Intensity Soil Surveys (HISS), soil pit descriptions, and assessments of soil suitability for individual sewage disposal systems (ISDS).
- Performs inspections and monitoring of erosion and sedimentation controls for new construction.
- Performs monitoring and evaluations of surface water quality.
- Prepares a variety of environmental permitting and compliance documents.
- Performs GPS-assisted natural resource surveys including those of wetlands and watercourses.

1994 to 2000

ENSR International/Fugro East, Inc.
Senior Soil and Wetland Scientist

- Conducted wetland and resource area delineations in accordance with the Massachusetts Wetland Protection Act and Connecticut Inland Wetland and Watercourse Regulations.
- Performed wetland delineations in conjunction with the federal wetland delineation procedures utilizing the Corps of Engineers Wetland Delineations Manual (1987).
- Conducted hydric soil investigations and wetland classification and mapping.
- Collected storm water, surface water, and ground water samples from various sites throughout Massachusetts, New York, and Connecticut.
- Conducted soil and sedimentation control monitoring on various construction sites throughout Massachusetts and Connecticut.

Professional Resume: *(continued)*

JAMES M. McMANUS, M.S., CPSS

Principal Soil Scientist

WORK HISTORY *(continued):*

1994

**Town of East Windsor, CT
Inland Wetlands Officer**

- Enforced state and local inland and wetland and watercourse regulations. Acted as staff to the town's Inland Wetland Agency.
- Conferred with public officials, property owners and developers regarding proposed development and existing violations.
- Performed site inspections for proposed development and on-going construction and reported status to the Commission at monthly meetings.

1994

**USDA-NRCS Windsor, CT
Soil Scientist Volunteer**

- Assisted soil conservationists in preparing conservation plans.
- Assisted soil scientists with soil survey activities.

1990 to 1992

**University of Connecticut, Storrs, CT
Teacher Assistant**

- Taught undergraduate students practical application of lecture material.
- Conducted laboratory experiments.
- Ensured the proper use of laboratory facilities.

1988 to 1990

**EnviroTech, Putnam, CT
Soil and Wetland Scientist**

- Identified wetlands at proposed developed locations relative to the State of Connecticut definition of wetlands.
- Analyzed soil pits profiles for color, consistency, and drainage characteristics for suitability for individual sewage disposal systems.
- Evaluated and delineated field sites for upland and wetland soil areas.

Professional Resume: *(continued)*

James M. McManus, MS

Principal Soil Scientist

WORK HISTORY *(continued)*:

1987 to 1988

Town of Tolland, CT
Soil Scientist/Town Planner Intern

- Reviewed erosion control plans with commercial developers assuring that the plans complied with town regulations.
- Assisted in the planning and enforcement of erosion and sediment control. Conferred with contractors to insure that deficiencies were controlled in a timely manner.

IWC mtg
Jul 27, 2022
OF

MEMORANDUM IN SUPPORT OF FARRELL BUILDING APPLICATION

TO: NEWTOWN INLANDS WETLANDS COMMISSION

FROM: ROBERT H. HALL

RE: WETLANDS PERMIT FOR 90 MT. PLEASANT ROAD

JULY 27, 2022

There are three subjects for this Memorandum:

First, that the project should be approved because it meets the factors set forth in Section 22a-41 of the Connecticut General Statutes and Sections 10.2 through 10.7 of Newtown's Inland Wetlands and Watercourse Regulations;

Second, that this proposal has less impact on the inland wetlands and watercourses than the medical office proposal for this property approved by this commission on July 11, 2018, and

Third, that this commission should deny the request of Patrick Napalitano to have intervenor status in this application.

FIRST: The activity described in the application is a regulated activity because it discharges water within 100 feet measured horizontally from the boundary of any wetland or watercourse. The regulated area, however, is the wetland or watercourse itself, not the 100 foot buffer, see Newtown Inland Wetlands and Watercourses Regulations ("IWWR") Sec. 2.1, Definitions. The definitions in the Newtown Regulations generally copy the definitions from Section 22a-38 of the Connecticut General Statutes, except for Regulated Area and "significant impact activity."

It should be noted that both Section 22a-41 of the Connecticut General Statutes

and the "Criteria for Decision", Sec. 10.2 IWWR, and Sections 10.3 through 10.7 IWWR are also identical to the Connecticut General Statutes (Conn. Gen. Stat.). Accordingly, court cases which apply the criteria in Section 22a-41 Conn. Gen. Stat. would apply equally to the criteria in the Newtown regulations.

Since this memorandum is presented at the beginning of the hearing and since most of the criteria are subjects which will be discussed at the hearing this part of the memorandum is primarily to set the framework in which a decision should be made. I would point out that reading either Section 22a-41 Conn. Gen. Stat. or the IWWR, the key is impact on the wetlands or watercourses themselves and not any other impact which you might find objectionable. If it does not impact the wetlands or watercourses it is not a factor which can be considered in your decision making process. As noted in Paragraph 10.6 of the regulations, any activity outside of the wetlands or watercourses must "impact or affect the physical characteristics of" the wetlands or watercourses in order to justify a denial or imposition of a condition of approval.

SECOND: The subject property at 90 Mt. Pleasant Road was approved for a vastly larger project on July 11, 2018 involving 1225 parking spaces, some of which were in the lower level of a building and 100,000 square feet of building footprint. Although the building footprints of the current proposal are actually larger than what was approved, the impervious area is significantly less because of the very large number of parking spots previously approved. They may not have been excessive as to that project, but they are more than double what is proposed for Farrell's project.

For what it is worth, Farrell's application for 220 rental apartment units and a common clubhouse/activity center must be looked at as presented. It is our belief that

the proposal will meet the Newtown Zoning Regulations as proposed to be amended. If, for some reason, the Planning and Zoning Commission questions the number of units, required parking, or approves a slightly modified project, that is the jurisdiction of the Planning and Zoning Commission and should not be a factor in your decision on this application. In other words, this commission should not speculate on what action the P&Z will take. Issues outside of the impact on the wetlands and watercourses are within the jurisdiction of the Planning and Zoning Commission.

THIRD: A verified petition to intervene in an Inland Wetlands proceeding is required to meet the criteria of Section 22a-19 of the Connecticut General Statutes. Those criteria are that the verified petition state with specificity how the proposed conduct "has, or . . . is reasonably likely to have the effect of unreasonably polluting, impairing or destroying the public trust in the air, water or other natural resources of the state." If the intervenor makes the necessary allegations then intervention is a matter of right.

Section 22a-19 subsection (2) requires the verified petition to

"contain specific factual allegations setting forth the nature of the alleged unreasonable pollution, impairment or destruction of the public trust in air, water or other natural resources of the state and should be sufficient to allow the [Commission] to determine from the verified pleading whether the intervention implicates an issue within the [Commission's] jurisdiction."

The allegations must be factual and must allow this commission to determine from the petition itself whether the intervention involves an issue "within the [Commission's] jurisdiction". Subsection 22a-19 points out that even if the intervenor alleges "unreasonable pollution, impairment or destruction" of the public trust in the air, water or natural resources of the state and also alleges that there is a "feasible and

prudent alternative” this commission will not reach the “feasible and prudent alternative” criteria viz-a-viz the intervenor unless the intervenor’s allegations specifically show that there is or it is reasonably likely that there will be “unreasonable pollution, etc.”

The “specific factual allegations” in the verified petition of Patrick Napolitano are contained in Paragraph 1.a and b. of the petition. The first sentence states that the proposal increases intensity of use with 220 apartments but only one “entrance/exit.” This does not suggest how the wetlands or watercourses might be affected. The next, related sentence, states that these conditions “are harmful to health and safety of the community [emphasis supplied].” Again, not within the jurisdiction of the IWWC

The third sentence sets forth a claim that there is not adequate distance “between the proposed activity and local residents”. The local residents may try to prove that they are impacted, but again, the impact must be to wetlands or watercourses in order for this Commission to have jurisdiction, not the residents.

The last sentence of paragraph 1.a starts with the word “this” without making clear what the antecedent is. Grammatically it refers to “adequate distance between the proposed activity and the local residents.” Even if “this” refers to all the preceding allegations none of them implicate harm to the wetlands or watercourses, only to the “community” or “local residents.”

Sub-paragraph 1.b is equally deficient in alleging harm to wetlands or watercourses. Yes, there will be grading outside the wetlands (none inside) and mostly out of the buffer area, but without an allegation that the grading or the “scaling down the land” will have a negative impact on the “unnamed tributary” or the wetlands there is no basis to allow an intervention.

The legal issue in all these allegations, specifically in Paragraph 2, is that until the “unreasonable pollution, impairment or destruction” of the public trust is alleged, there is no need to consider feasible and prudent alternatives.

Accordingly, the claim in paragraph 2 that there are feasible and prudent alternatives is premature because the putative intervenor has not even alleged specifics to show a right to intervene. The predicate to needing a feasible and prudent alternative is “unreasonable pollution, etc.” Adding an allegation that there are alternatives to the applicant’s proposal does not add to the right to intervene. There are always alternatives; the issue is not that there could be other things done to develop the land but whether the applicant’s proposal causes “unreasonable” pollution, etc. If Patrick Napolitano cannot allege any specific activity which causes unreasonable pollution, he is not entitled to intervene. The “unreasonable” criteria protects a commission from having to consider alternatives, limited only by the imagination of the intervenor

The rest of the petition claims that the intervenor is entitled to intervene as a matter of right. He cites several cases which support that position, which nobody would argue with if the intervenor had conformed to the requirements of the statutes in the first place.

The closest the intervenor comes to making a specific allegation in the entire document is in the last paragraph where he makes the statement that he has made “specific, verified allegations of unreasonable impairment of natural resources” The problem with this statement is that when the allegations referred to are examined, as above, they do not make specific allegations of unreasonable pollution, etc, which is

the statutory requirement. What he also fails to allege is that whatever the impact is, is “unreasonable”, a requirement of Section 22a-19 authorizing interventions.

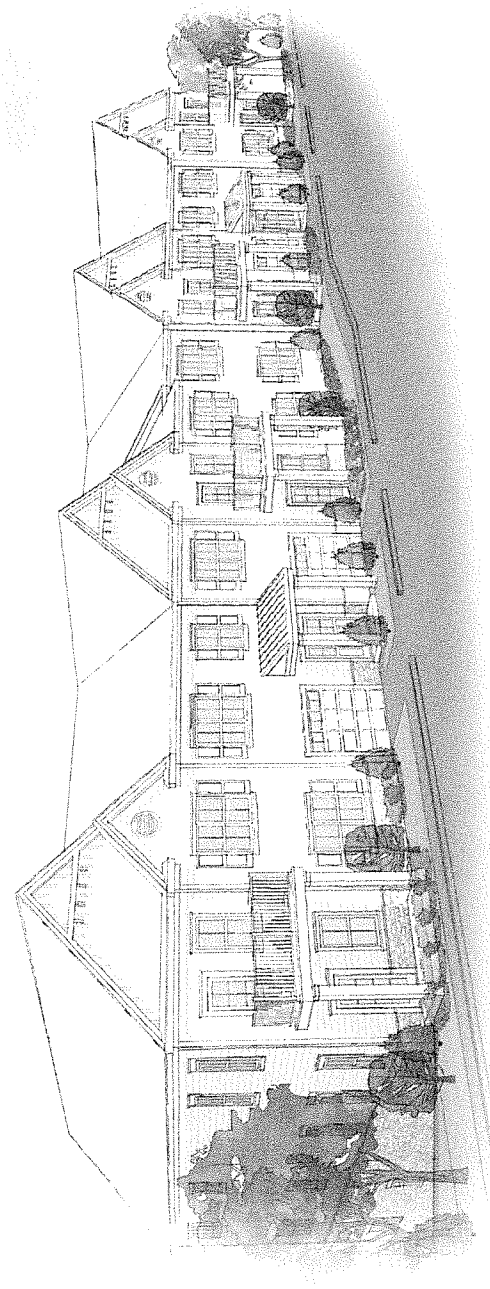
CONCLUSION: It is requested that the commission consider the facts presented at the public hearing, that it find that the application meets the criteria for decision set forth in Section 10.2 of the Inland Wetlands and Watercourses Regulations and Section 22a-41 of the Connecticut General Statutes and that feasible and prudent alternatives need not be considered or speculated upon and that the petition to intervene of Patrick Napalitano be denied.

RESPECTFULLY SUBMITTED,

Robert H. Hall, Attorney for
Farrell Building Company

IWC mtg.
7/27/22
RF

Newtown Commons
90 Mount Pleasant Road
Newtown, CT



July 27th, 2022 Inland Wetlands Commission Meeting Presentation

Project Team

- Steve Zagoren – Farrell Company
 - Has worked in Newtown (Farrell Communities at Sandy Hook)
- James Ryan, RLA, Principal – JMC
- Anthony Nester, RLA, Associate Principal - JMC
- Paul Dumont, PE, Design Manager – JMC
- James M. McManus, MS, CPSS – JMM Wetland Consulting Services
- Robert H. Hall, Esq. – Project Attorney

Wetlands Permit

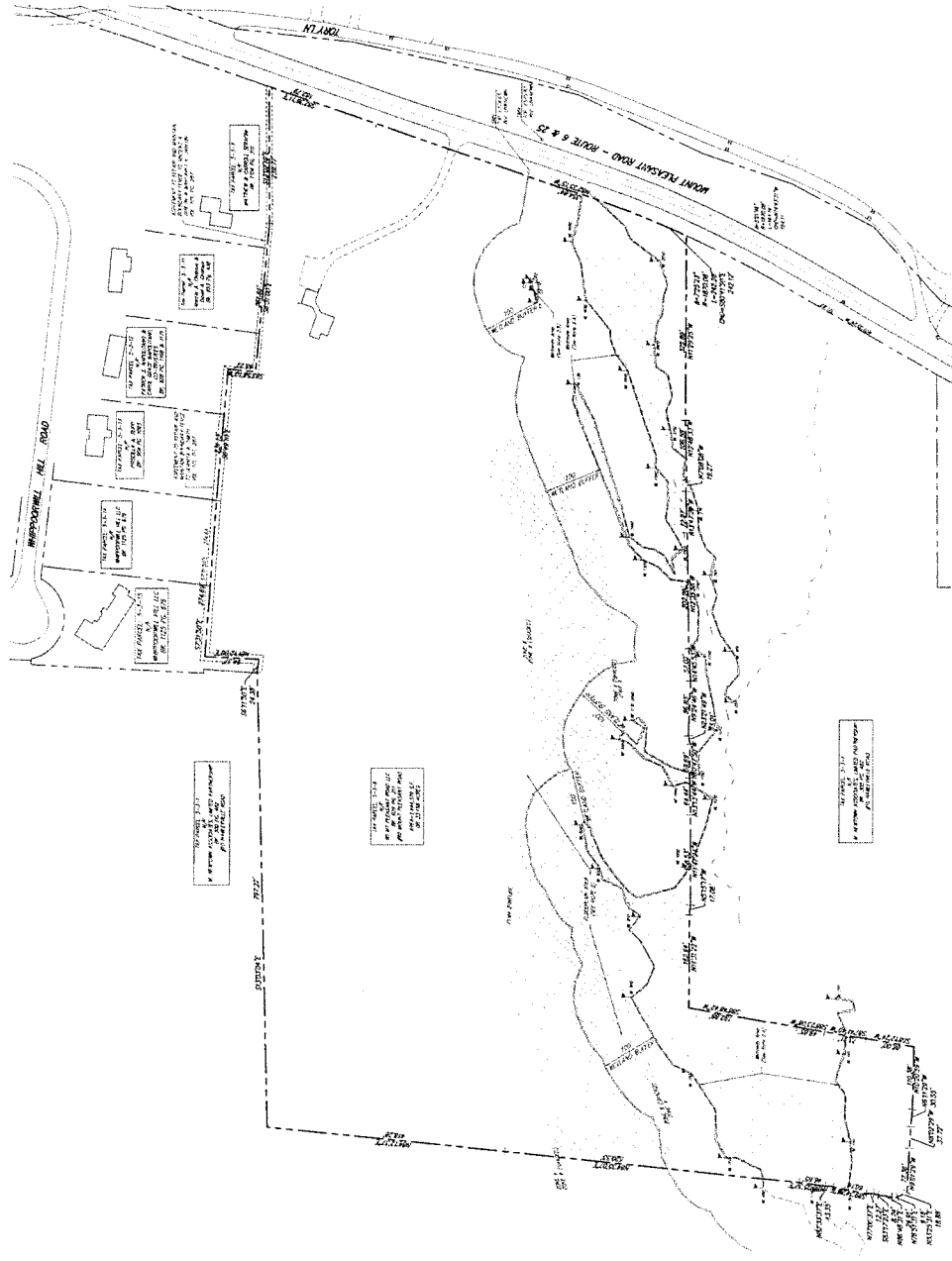
- We are before you tonight requesting a wetlands permit for the work proposed within the regulated areas on-site



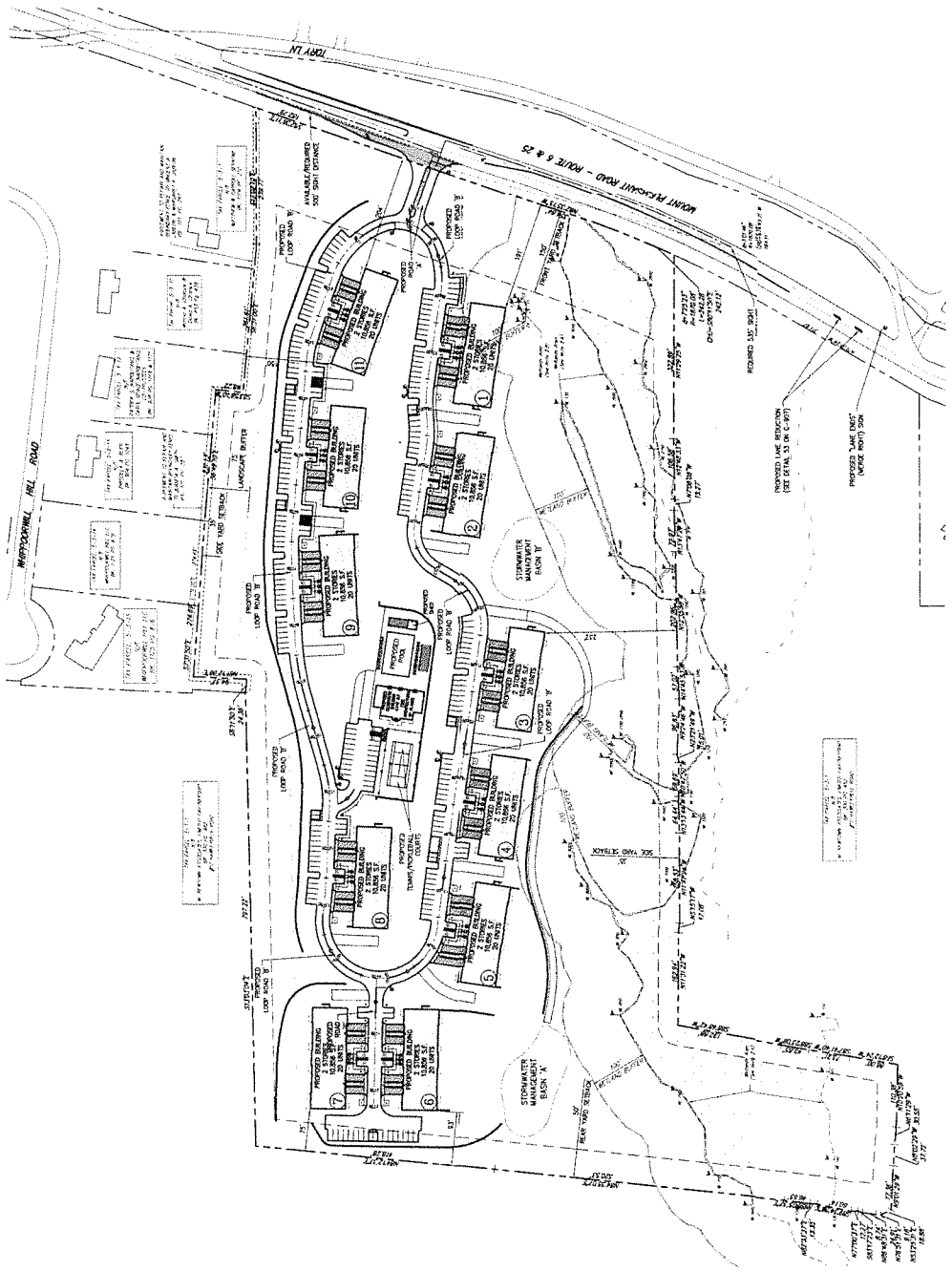
Project Team

Newtown Commons, 90 Mount Pleasant Road, Newtown, CT

- The property is generally sloping, with the grade dropping from east to west
- The property contains areas of regulated FEMA Floodplain, designated as Zone X, shown as a shaded hatch on the plan.
- The western portion of the property contains areas of wetlands, in addition to their associated 100' regulated area
- The larger wetland area on-site is associated with an intermittent watercourse as described by JMM
- There is a separate, isolated wetland area on the south of the site, as shown on the attached map



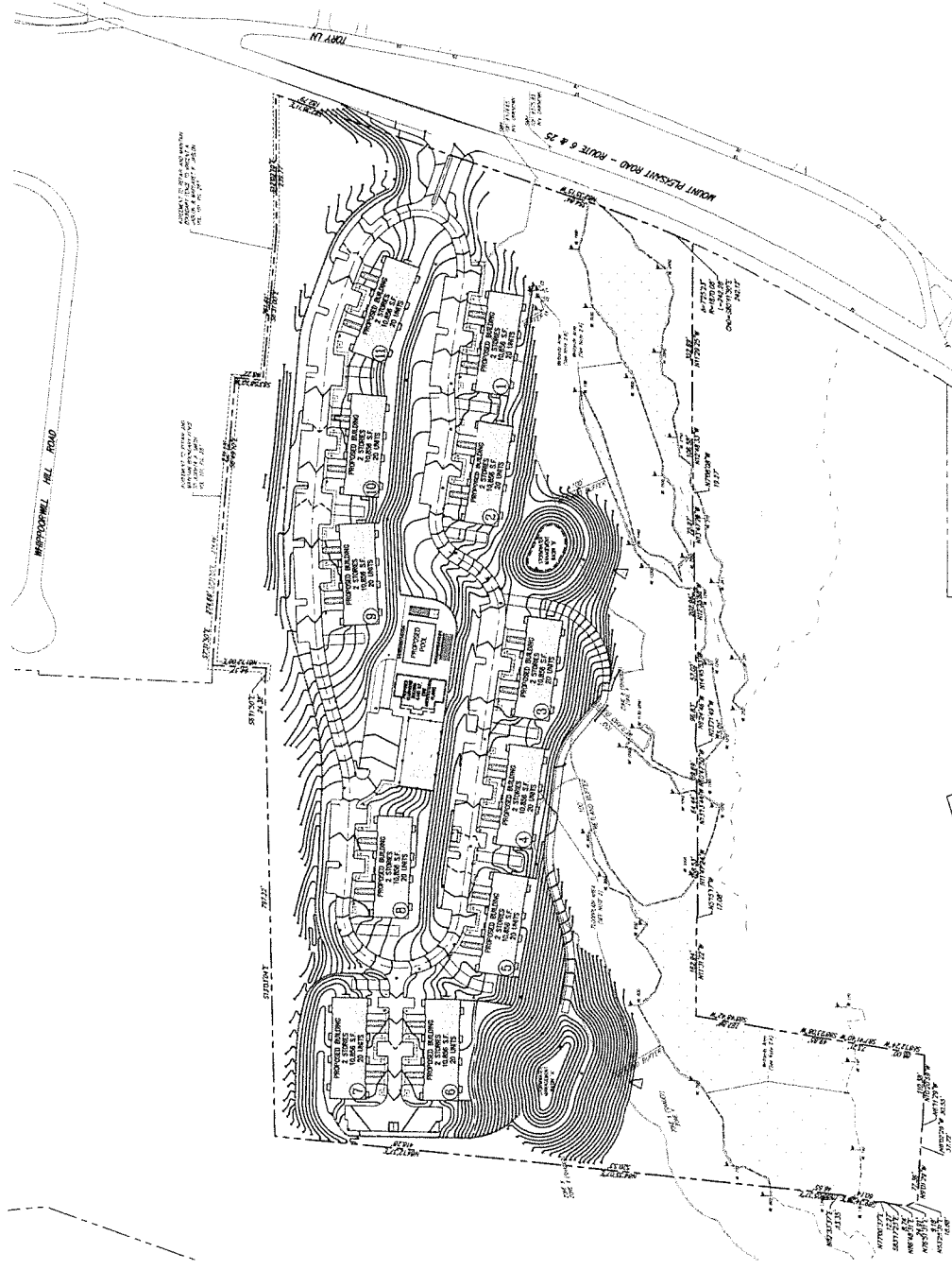
- The applicant proposes to create a garden apartment development in the upland eastern portion of the property, with 11 buildings and a clubhouse, totaling 220 units
- The general layout of the site was developed with a sensitivity to the on-site wetlands and regulated areas, working closely with our wetland consultant
- There are two rows of buildings and a looping access road, which were designed to work with the sloping topography
- The center of the site contains a clubhouse with a pool, tennis courts, and a parking area
- Several green building practices are incorporated into the development such as grasscrete emergency access drives and EV charging stations

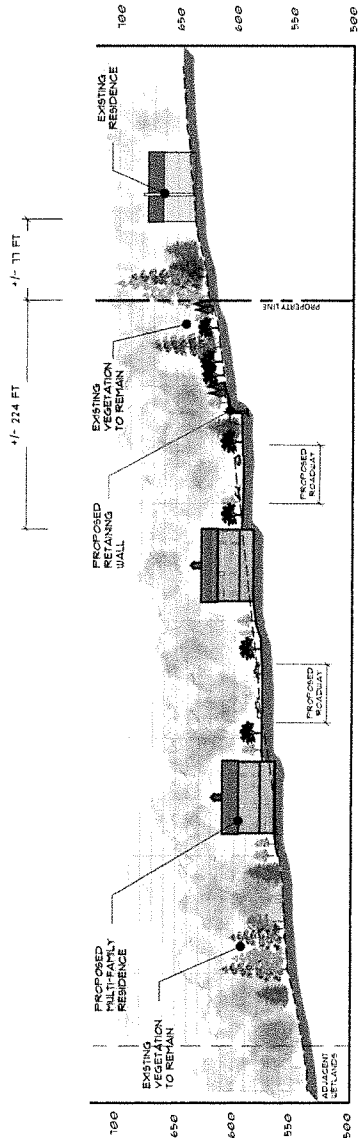


Site Layout

Newtown Commons, 90 Mount Pleasant Road, Newtown, CT

- The east end of the site contains a small graded slope and a retaining wall to step the grade down to the eastern access road
- The buildings are designed with a 'step' in the Finished Floor Elevation, in order to further reduce proposed earthwork
- A slope is proposed between the access drives, to the second row of buildings second row of buildings steps down in grade again, closer to the natural grade
- Slopes and retaining walls are proposed at the base of the site to meet existing grade
- The site is substantially designed to be balanced, not accounting for structural fill requirements

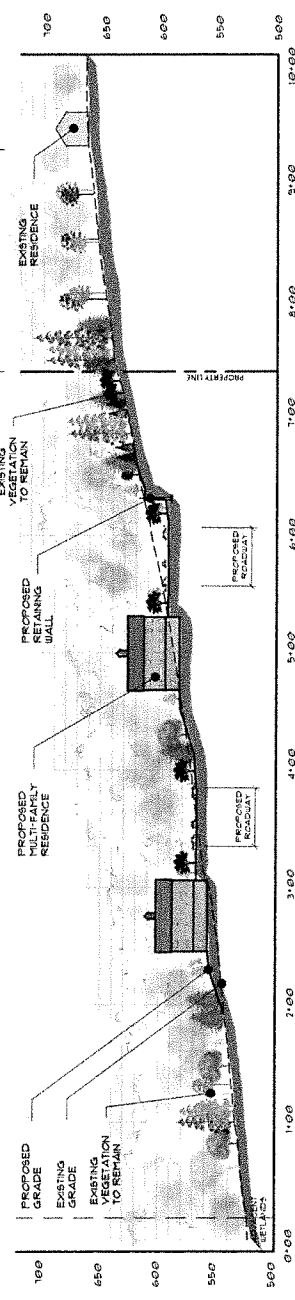




SECTION A - A'

HORIZONTAL: 1" = 30'

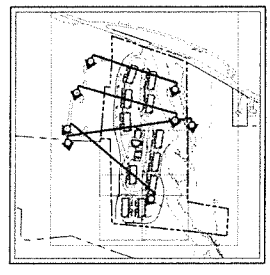
VERTICAL: 1" = 30'



SECTION B - B'

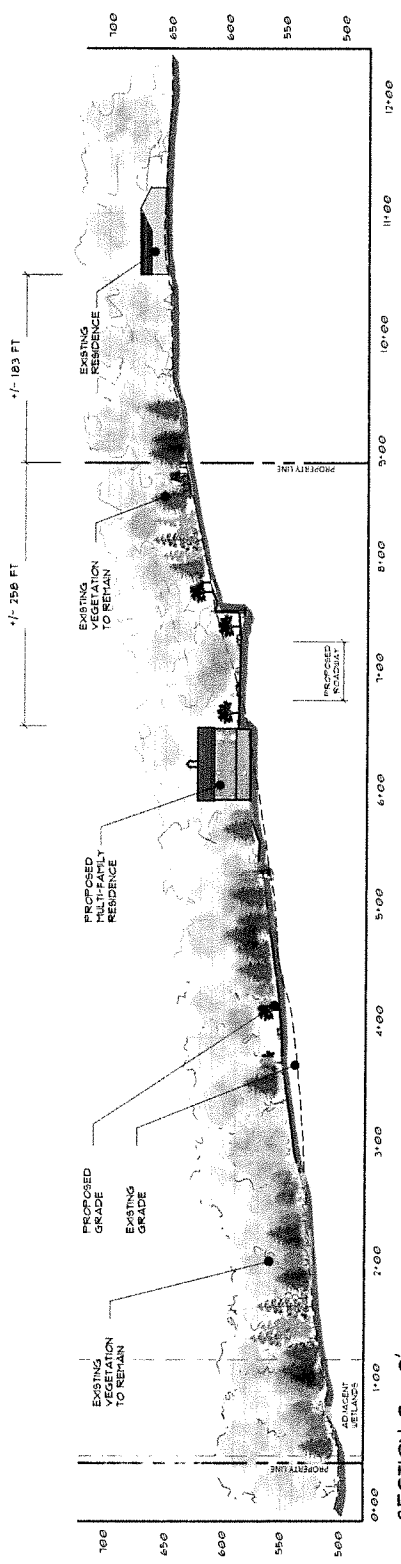
HORIZONTAL: 1" = 30'

VERTICAL: 1" = 30'

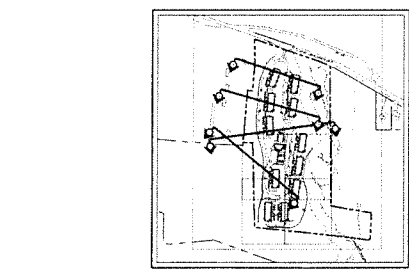


Cross Sections

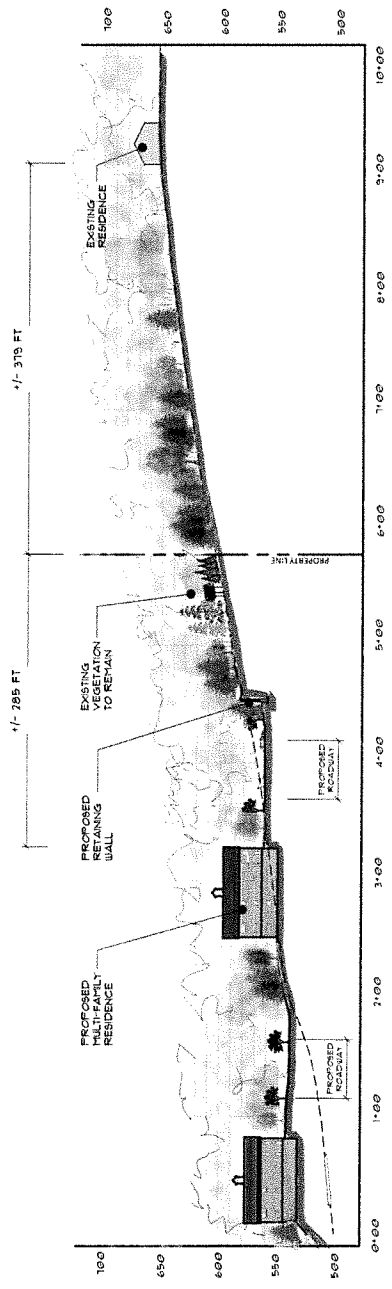
Newtown Commons, 90 Mount Pleasant Road, Newtown, CT



SECTION C - C'
 HORIZONTAL 1"=50'
 VERTICAL 1"=50'



KEY MAP
 SCALE: 1"=1000'



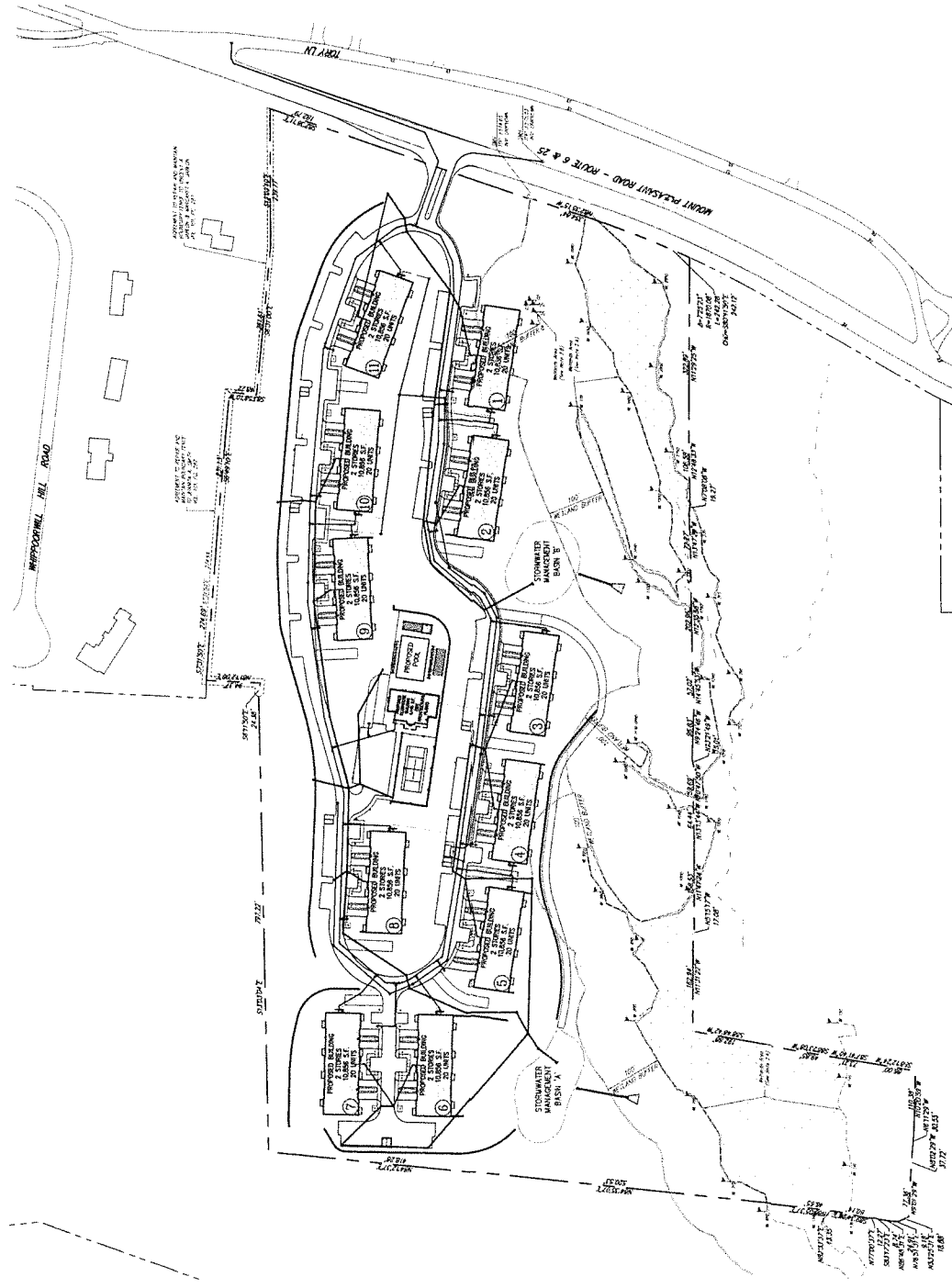
SECTION D - D'
 HORIZONTAL 1"=50'
 VERTICAL 1"=50'



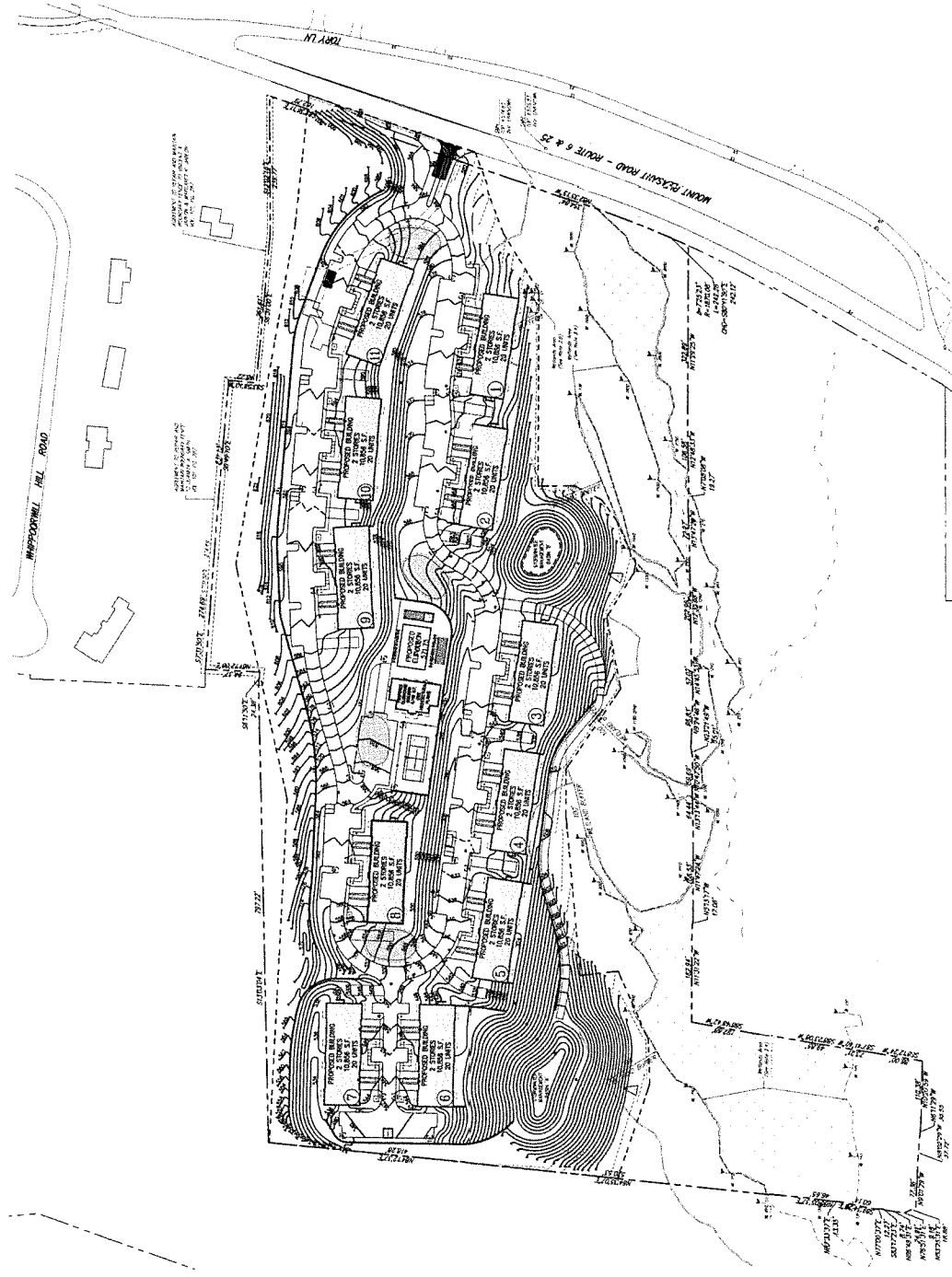
Cross Sections

Newtown Commons, 90 Mount Pleasant Road, Newtown, CT

- Stormwater management for the project is being handled with two proposed infiltration basins
- There is a small off-site area which drains to the site, uphill flows are being bypassed via swales behind the walls
- Pretreatment is proposed via hydrodynamic separators structures which will treat 25% of the WQv in accordance with CT DEEP standards
- The infiltration basins provide treatment for 100% of the required WQv
- Two conduit level spreaders are proposed at the discharge point of each basin



- Erosion & Sediment control measures have been designed in accordance with Connecticut regulations to limit the transport of sediment, reduce erosion, and protect the wetland areas
- The project will employ measures including
 - Stabilized construction access
 - Silt fencing
 - Inlet protection
 - Tree protection
 - Bypass swales and stone check dams
 - Soil stockpiles
 - Temporary sediment basins



- A detailed landscaping design was proposed for the site
- Landscaping is proposed throughout the site
- Buffer plantings are proposed at the property eastern boundary
- Slope stabilization seed mixes are proposed on all of the graded slopes that are proposed including areas within the regulated area
- The stormwater basins are proposed to be seeded with mixes consistent with CT DEEP regulations
- No non-native species are proposed



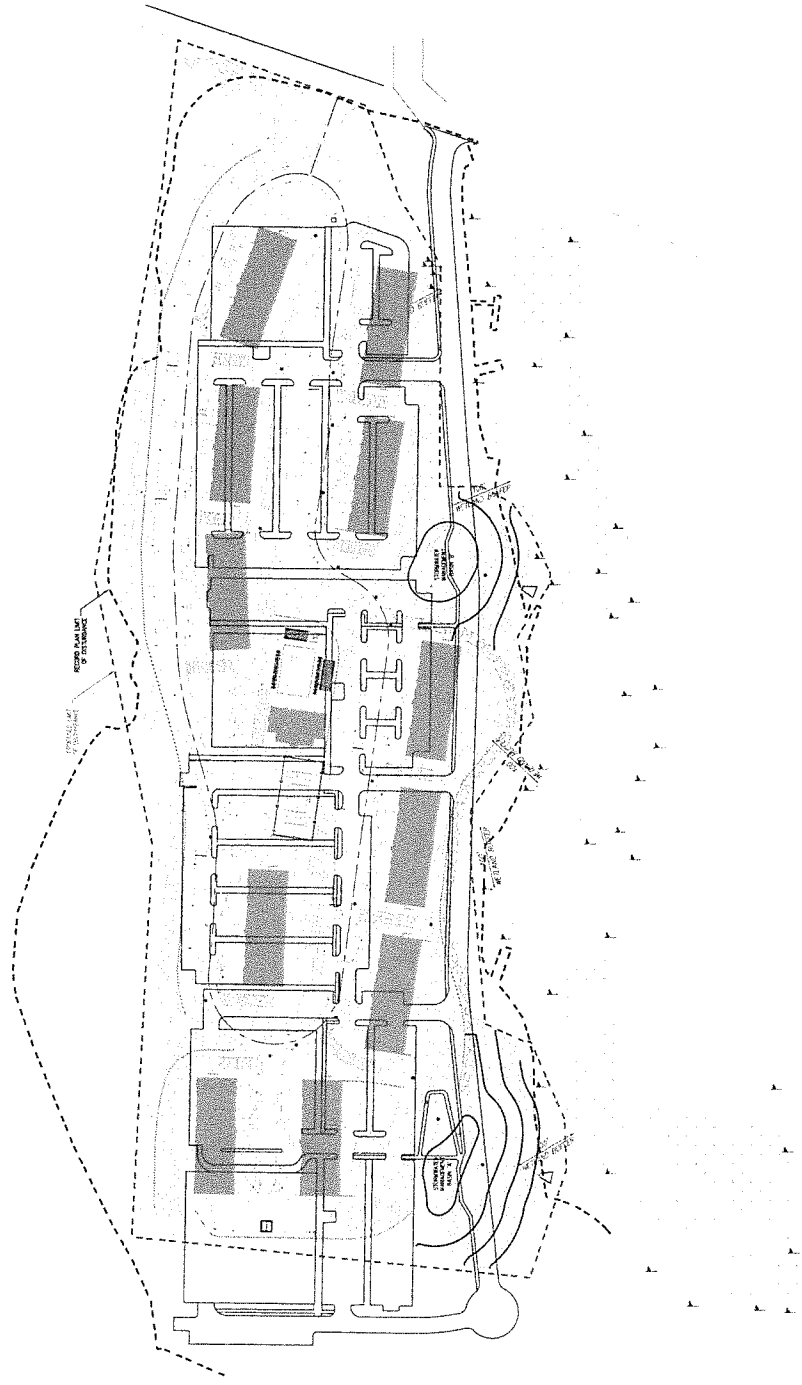
- We understand a wetlands permit application was approved in 2018 for a medical office / warehouse development

- This figure shows the differences in the disturbance area relative to the mapped wetlands

• Site Impervious Coverage draining towards wetlands:

- Previously approved
 - 520,000 S.F. / 11.9 Ac.
 - (1,225 parking spaces)
- Currently Proposed
 - 320,000 S.F. / 7.3 Ac.
 - (338 parking spaces)
- ±4.6 acre reduction (887 spaces)

The greatest source of urban pollutants comes from pavement and parking areas.

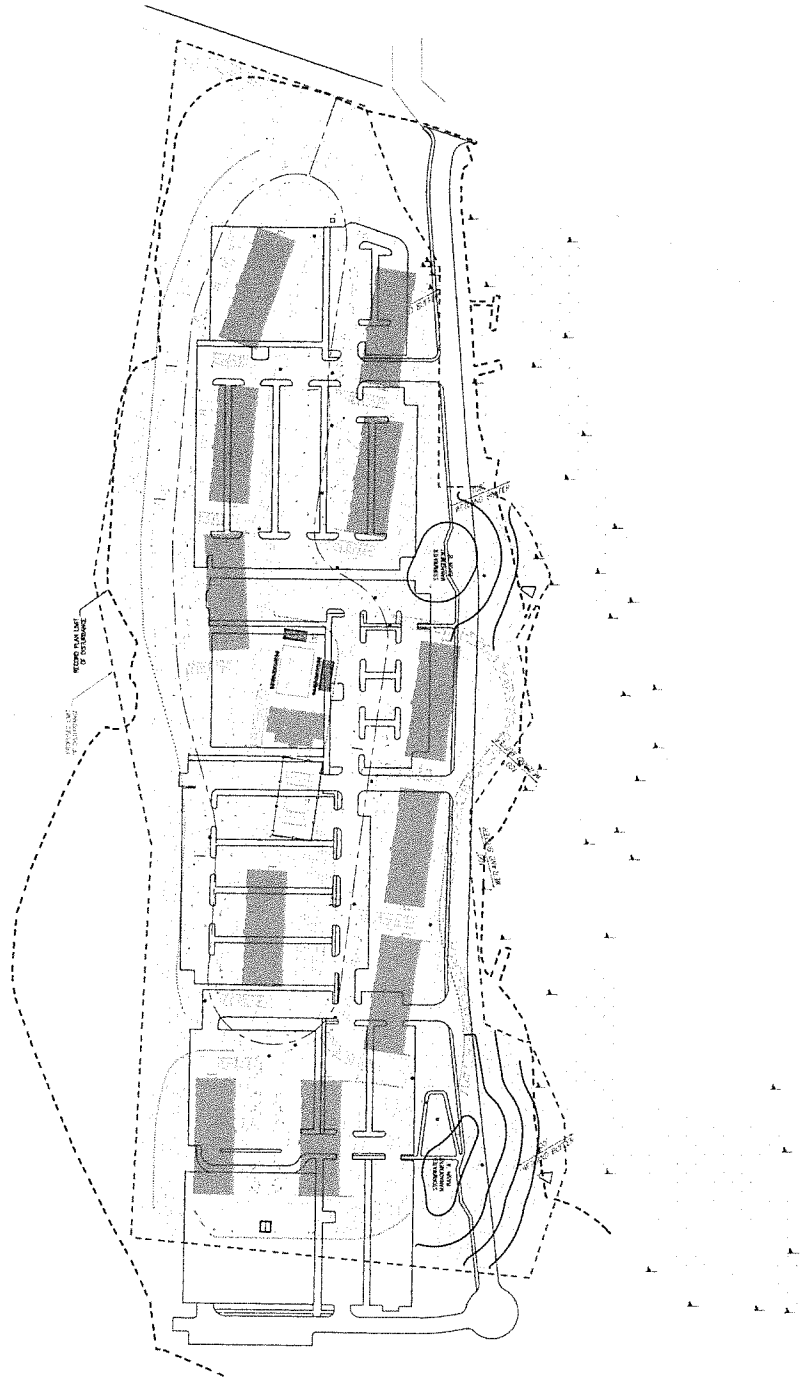


- Limit of Disturbance:

- Previously approved
 - 1,008,000 S.F.
- Currently Proposed
 - 955,000 S.F.
 - ±1 acre reduction

- Impervious surface within buffer:

- Previously approved
 - 125,000 S.F. / 2.9 Ac.
 - Primarily entrance roadway
- Currently Proposed
 - 4,000 S.F. limited to gravel access drive for stormwater basin
 - 5,000 S.F., building area adjacent to C series wetland
 - 0.2 Acres total
 - ±2.7 acre reduction



JMM WETLAND CONSULTING SERVICES, LLC

23 Horseshoe Ridge Road
Newtown, CT 06482

Phone: 203-364-0345
Mobile: 203-994-3428
james@jmmwetland.com
jmmwetland.com

April 28, 2022

INLAND WETLANDS COMMISSION
ORIGINAL DOCUMENT

Town of Newtown
Inland Wetlands and Watercourses Commission
3 Primrose Street
Newtown, CT 06470

Received Date: 5 - 3 - 22

Received By: RF

RE: **WETLANDS ASSESSMENT/IMPACT ANALYSIS**
Proposed Residential Development – “*Newtown Commons*”
90 Mount Pleasant Road, Newtown, Connecticut

JMM Job # 22-3027-NWT-1

Dear Commissioners:

Per the request of the applicant, Farrell Building Company, JMM Wetland Consulting Services, LLC (JMM) is providing this *Wetlands Assessment/Impact Analysis* report to be submitted as part of an application to conduct regulated activities at the above-referenced property.

JMM initially visited the site on June 22nd, 2015 to conduct wetland boundary delineations, in accordance to the CT State Statutes, as well as obtained baseline data for this report. The soils were carefully reviewed within the subject site with the use of a hand-held soil auger and spade, to a minimum depth of 24-inches, and any areas determined to have poorly or very poorly drained soils and/or regulated watercourses were identified and delineated. JMM also conducted a site visit on March 30th, 2022 to gather additional baseline information as well as to obtain recent photos of the regulated resources (i.e., wetlands and watercourses).

In this report, JMM is providing the following:

1. Descriptions of the on-site regulated wetlands and watercourses within the subject site.

2. A functions and values assessment of the regulated wetlands associated within and adjacent to the subject site.
3. An analysis of the direct and potential indirect impacts upon the regulated resources and upon the functions and values they provide associated with any activities within the subject site.

1.0 Introduction

The +/- 33.16-acre parcel is located on the north side of Mount Pleasant Road (see Figure 1, attached). In its present state, the site is an undeveloped parcel with a mix of dense to very dense shrubby and vine tangle areas, and forested upland and wetland areas, which include two watercourses, which join at the far northwesterly section of the site, to flow to a culvert under Interstate 84, before joining Pond Brook, a perennial watercourse that flows to Lake Lillinoah, an impoundment of the Housatonic River. The on-site watercourses are intermittent to semi-perennial.

Review of archival aerial photography (e.g., 1965, 1970, 1986, etc.), reveal that the great majority of the site, including most of the delineated wetland areas, were in open pasture several decades ago. It is worth noting that during the 2015 site visit a single-family residence located in the southeastern portion of the site had been recently removed.

2.0 Description of Regulated Resource Areas

#-Series Wetland

This wetland area is located in the southwestern portion of the overall site. The wetland is characterized by an intermittent watercourse, dominated by large stones, cobbles, and sand deposits on a moderately to moderately-steep topography, with its associated forested wetland. The wetland is classified as a *palustrine, broad-leaved forested* wetland (PFO1E) according the National Wetland Inventory (NWI) Classification system (see photos 1-3, attached). The watercourse is classified as *riverine, intermittent, streambed, seasonally flooded* (R4SBC) by the NWI.

The dominant hydrologic regime is *seasonally saturated/seasonally flooded/temporarily flooded* and the wetland's hydro-geomorphic classification (HGM) is predominately *groundwater/surface water slope*. Within this wetland area soils were predominately poorly

drained; however, very poorly drained may be present. JMM Wetland boundary markers JMM-1 to JMM-75 demarcate this regulated wetland.

Dominant and common vegetation observed within the regulated area included such species as red maple, white ash, hickory, spicebush, Japanese barberry (invasive), silky dogwood, multiflora rose (invasive), autumn olive (invasive), skunk cabbage, sedges including tussock and fringed, Canada mayflower, stinging nettle, jewelweed, sensitive fern, wood fern, soft rush, goldenrods, asters, Asiatic bittersweet (invasive), and poison ivy, to name a few.

A/B-Series Wetland

These wetland areas are located in the northwestern portion of the site and contains the same intermittent watercourse described in the #-series wetland. These wetlands are also classified as a *palustrine, broad-leaved forested* wetland (PFO1E) according the NWI. The A-series wetland demarcated the eastern side of the regulated wetland while the B-series demarcate the western edge (see photos 4, 6, and 7).

The dominant hydrologic regime are *seasonally saturated/seasonally flooded/temporarily flooded* and the wetland's hydro-geomorphic classification (HGM) is predominately *groundwater/surface water slope*. The soils were observed to be poorly drained within this regulated wetland. JMM wetland boundary markers JMM-A-1 to JMM-A-23 and JMM-B-1 to JMM-B-14 demarcate this regulated wetland.

The vegetation observed within the regulated area was very similar to the #-series, which includes a very dense Japanese barberry understory.

C-Series Wetland

During the 2015 wetland delineations effort, JMM came across a small isolated wetland pocket, in the southwesterly section of the site, surrounded by very dense shrubby vegetation. This wetland was delineated with JMM wetland boundary markers JMM-C-1 to JMM-C-5 (see photo 5). While this wetland was shown on the JMM's original wetlands sketch, it could not be found by the land surveyor at the time, and was never surveyed. It may be within the proposed development envelope or it may not be. JMM did not attempt to relocate this wetland, in part because its exact location is unknown, but also because the general area where it could be found is even denser than in 2015, and cannot be explored without a significant clearing of the understory.

drained; however, very poorly drained may be present. JMM Wetland boundary markers JMM-1 to JMM-75 demarcate this regulated wetland.

Dominant and common vegetation observed within the regulated area included such species as red maple, white ash, hickory, spicebush, Japanese barberry (invasive), silky dogwood, multiflora rose (invasive), autumn olive (invasive), skunk cabbage, sedges including tussock and fringed, Canada mayflower, stinging nettle, jewelweed, sensitive fern, wood fern, soft rush, goldenrods, asters, Asiatic bittersweet (invasive), and poison ivy, to name a few.

A/B-Series Wetland

These wetland areas are located in the northwestern portion of the site and contains the same intermittent watercourse described in the #-series wetland. These wetlands are also classified as a *palustrine, broad-leaved forested* wetland (PFO1E) according the NWI. The A-series wetland demarcated the eastern side of the regulated wetland while the B-series demarcate the western edge (see photos 4, 6, and 7).

The dominant hydrologic regime are *seasonally saturated/seasonally flooded/temporarily flooded* and the wetland's hydro-geomorphic classification (HGM) is predominately *groundwater/surface water slope*. The soils were observed to be poorly drained within this regulated wetland. JMM wetland boundary markers JMM-A-1 to JMM-A-23 and JMM-B-1 to JMM-B-14 demarcate this regulated wetland.

The vegetation observed within the regulated area was very similar to the #-series, which includes a very dense Japanese barberry understory.

C-Series Wetland

During the 2015 wetland delineations effort, JMM came across a small isolated wetland pocket, in the southwesterly section of the site, surrounded by very dense shrubby vegetation. This wetland was delineated with JMM wetland boundary markers JMM-C-1 to JMM-C-5 (see photo 5). While this wetland was shown on the JMM's original wetlands sketch, it could not be found by the land surveyor at the time, and was never surveyed. It may be within the proposed development envelope or it may not be. JMM did not attempt to relocate this wetland, in part because its exact location is unknown, but also because the general area where it could be found is even denser than in 2015, and cannot be explored without a significant clearing of the understory.

This is small (+/- 700 square foot) wetland is likely the result of past agricultural activities, has disturbed soils, is seasonally saturated, and is dominated by shrubs such as multiflora rose, Japanese barberry, and silky dogwood, autumn olive, red cedar, jewelweed, goldenrods, and poison ivy, as well as other.

3.0 Soils of Study Area

The soil types were found to be both undisturbed and disturbed throughout the site. The disturbed soils were observed mainly in the southern portions of the site adjacent to the Mount Pleasant Road and in the vicinity of the recently removed single-family residence. The undisturbed soils are derived from glacial till (i.e., unstratified sand, silt, and rock) deposits, with a "hardpan." The undisturbed upland soils are comprised of the well-drained Paxton (84) soil series and the moderately well drained Woodbridge (47) soil series.

Paxton fine sandy loam (84). This series consists of deep, well drained soils formed in a coarse-loamy mantle underlain by firm, compact glacial till on uplands. They are nearly level to very steep soils on till plains, low ridges and drumloidal landforms. The soils formed in acid glacial till derived mainly from schist, gneiss or granite. In tilled areas, these soils have a dark brown fine sandy loam surface layer 8 inches thick. The subsoil from 8 to 26 inches is dark yellowish brown and olive brown fine sandy loam. The substratum from 26 to 60 inches is olive, very firm and brittle gravelly fine sandy loam.

Woodbridge fine sandy loam (47). This series consists of deep, moderately well drained soils formed in a coarse-loamy mantle underlain by firm, compact glacial till on uplands. They are nearly level to moderately steep soils on till plains, low ridges and drumloidal landforms. The soils formed in acid glacial till derived mainly from schist, gneiss or granite. In tilled areas, these soils typically have a very dark grayish brown fine sandy loam surface layer 7 inches thick. The subsoil from 7 to 30 inches is dark yellowish brown and light olive brown fine sandy loam, mottled below 18 inches. The substratum from 30 to 60 inches is light olive brown, very firm and brittle gravelly fine sandy loam.

The disturbed upland soils were mapped as the Udorthents (308) mapping unit.

Udorthents (308). This soil mapping unit consists of well drained to moderately well drained soils that have been altered by cutting, filling, or grading. The areas either have had two feet or more of the upper part of the original soil removed or have more than two feet of fill material on top of the original soil. *Udorthents* or Made Land soils can be found on any soil parent material but are typically fluvial on glacial till plains and outwash plains and stream terraces.

The undisturbed wetland soils were identified as the poorly to very poorly drained Ridgebury, Leicester, and Whitman (3) soil series complex.

Ridgebury fine sandy loam (3). This soil series consists of deep, poorly and somewhat poorly drained soils formed in a coarse-loamy mantle underlain by firm, compact glacial till on uplands. They are nearly level to moderately steep soils on till plains, low ridges and drumloidal landforms. The soils formed in acid glacial till derived mainly from schist, gneiss or granite. Typically, these soils have a black sandy loam surface layer 6 inches thick. The mottled subsoil from 6 to 16 inches is olive gray sandy loam. The mottled substratum from 16 to 60 inches is a light olive brown and olive, very firm and brittle gravelly sandy loam.

Leicester fine sandy loam (3). This series, which is some Connecticut counties is found only in complex with the Ridgebury and Whitman series, consists of deep, poorly drained loamy soils formed in friable glacial till on uplands. They are nearly level to gently sloping soils in drainage ways and low-lying positions on till covered uplands. The soils formed in acid glacial till derived mainly from schist, gneiss or granite. Typically, these soils have a surface layer of black fine sandy loam 6 inches thick. The subsoil from 6 to 23 inches is grayish brown, mottled fine sandy loam. The substratum from 26 to 60 inches or more is dark yellowish brown, mottled, friable, gravelly fine sandy loam.

Whitman fine sandy loam (3). This series, which is some Connecticut counties is only mapped in complex with the Ridgebury and Leicester series, consists of deep, very poorly drained soils formed in a coarse-loamy mantle underlain by firm, compact glacial till on uplands. They are nearly level and gently sloping soils on till plains, low ridges and drumloidal landforms. The soils formed in acid glacial till derived mainly from schist, gneiss or granite. Typically, these soils have a black fine sandy loam surface layer 8 inches thick. The mottled subsoil from 8 to 15 inches is gray sandy loam. The mottled substratum from 15 to 60 inches is firm, olive gray to gray dense glacial till.

Any disturbed wetland soils were mapped as the Aquents (308w) soil mapping unit.

Aquents (308). This soil map unit consists of poorly drained and very poorly drained disturbed land areas. They are most often found on landscapes, which have been subject to prior filling and/or excavation activities. In general, this soil map unit occurs where two or more feet of the original soil surface has been filled over, graded or excavated. The *Aquents* are characterized by a seasonal to prolonged high ground water table and either support or are capable of supporting wetland vegetation. *Aquents* are recently formed soils, which have an aquic moisture regime. An aquic moisture regime is associated with a reducing soil environment that is virtually free of dissolved oxygen because the soil is saturated by groundwater or by water of the capillary fringe. The key feature is the presence of a ground water table at or very near to the soil surface for a period of fourteen days or longer during the growing season.

4.0 Functions/Values Assessment

The assessment of wetland functions and values is based primarily on the US Army Corps of Engineers' (USACE) *Descriptive Approach* (1995), and on best professional judgment.

A summary of the functions and values assessment can be found in Table 1, below. As can be seen, the JMM-#/A/B-series wetlands offers one principal function and value, that is, it is not only present, but available to at least a moderate-high degree. Other functions and values are present but are not principal, including *wildlife habitat, sediment/toxicant/pathogen retention, and nutrient removal/retention/transformation* as well as others.

This assessment is based on a number of factors, including the fact that the wetland that is adjacent to the proposed development, has a low diversity of vegetative cover types and plant species (i.e., dominated by Japanese barberry), show signs of past disturbance, has an abundance of invasive species, and the surrounding upland landscape (i.e., residential) is considered unfavorable. It is worth noting that the small isolated wetland pocket (i.e., C-series wetland) was not part of the functions and values assessment as it is too small in size to evaluate.

Table 1: Summary of Wetland/Watercourse Function-Value Assessment

Function/Value	#-Series Wetland	A/B-Series Wetland
Groundwater Recharge/Discharge	P	P
Floodflow Alteration	Y	Y
Sediment/Shoreline Stabilization	N	N
Sediment/Toxicant/Pathogen Retention	Y	Y
Nutrient Removal/Retention/Transformation	Y	Y
Production Export	Y	Y
Fish and Aquatic Habitat	N	N
Wildlife Habitat	Y	Y
Endangered Species Habitat	N	N
Visual Quality/Aesthetics	N	N
Educational/Scientific Value	N	N
Recreation (Passive, Active)	N	N
Uniqueness/Heritage	N	N

Notes: P = Principal function; Y = function present; N = function not appreciably present or absent

5.0 Proposed Activities

Overview

The plans reviewed by JMM, are entitled *Newtown Commons, 90 Mount Pleasant Road, Newtown, Connecticut* (47 Sheets), prepared for Farrell Building Company, 2317 Montauk Highway, Bridgehampton, NY 11932, by JMC of Armonk, NY, and dated April 28th, 2022. These plans show a proposed multi-family residential development consisting of 11 garden apartment buildings with 20 units per building with a total of 220 units, a clubhouse, associated roadway, stormwater management practices, landscaped areas, and other miscellaneous site improvements.

We should note that in analyzing potential indirect impacts to wetlands and watercourses, particularly for the maintenance of water quality and wetland/watercourse hydrology, we have heavily relied on the expert opinions of the design engineers (i.e., JMC), and their analysis presented in their *Preliminary Stormwater Pollution Control Plan*, dated March 17th, 2022, with a revision date of April 28th, 2022, heretofore referred to as the “Stormwater Management Report.”

Direct Wetland Impacts

According to the reviewed site plans, there will be *one direct impact* upon regulated wetlands and watercourses. This consists of the filling of the small, isolated wetland pocket (i.e., C-series wetland), delineated by JMM in 2015, but which was never located by survey. The impact is estimated at 700 square feet. This is considered a *minimal* impact, since this wetland is disturbed, man-influenced (past agriculture), and does not provide any substantive wetland functions and values.

Indirect Wetland Impacts

Indirect or secondary impacts to a wetland or watercourse can occur as a result of activities outside of wetlands or watercourses. Such impacts can be *short-term* or *long-term*, and are typically associated with erosion and sedimentation, mostly during the construction period, the removal or disturbance of vegetation in upland areas, but adjacent to wetlands or watercourses, the alteration of wetland hydrology or the flow regime of a watercourse, and the discharge of degraded or insufficiently treated surface water or groundwater, which may adversely impact the water quality of the regulated resources.

The potential for any of these indirect impacts to occur at the site as a result of the proposal depends on the regulated resources themselves, their sensitivity, their ecological and physical

characteristics, and the degree to which they provide recognized functions and values. These *potential* impacts are discussed below.

Erosion and Sedimentation

The potential for soil erosion and subsequent deposition in wetlands or watercourses exists at every construction site that involves soil disturbance. At this site the risk or the potential for adverse impacts from erosion and sedimentation is considered *low-moderate* to *moderate*. The primary reasons for this assessment are as follows: (1) a detailed erosion and sedimentation control plan has been prepared and submitted, which complies with the CT DEEP's 2002 *Connecticut Guidelines for Erosion and Sediment Control*, as well as any recent guidelines promulgated by regulatory agencies; and (2) the site's undisturbed soils are for the most part *moderately* erosive, with a few sections being of *moderate-high* erodibility, predominately due to the steeper slopes associated with areas of the site (see attached K-factor assessment). Therefore, it is JMM's opinion that with **diligent** monitoring and maintenance of erosion and sedimentation controls during the construction phase no adverse impacts to regulated resources are expected.

Removal of Native Vegetation and Habitat Loss

Habitat loss associated with land clearing is an unavoidable consequence of land development, which has the potential of impacting wetlands and watercourses. An effort has been made to limit the development area to the dense, post-agricultural areas dominated by invasive multiflora rose within old, fallow pasture fields. Moreover, for the most part, an adequate undisturbed buffer will remain to the delineated wetland boundaries, especially for the dominant wetland/watercourse corridor, to allow the regulated resources to continue providing similar functions and values as under existing conditions.

Potential Impacts to Wetland Hydrology and Stream Flow

The hydrologic and flow regime of the wetlands associated with the site are dependent on contributions via shallow groundwater flow and surface flows. The reviewed site plans show that an effort has been made to ensure that wetland hydrology will be preserved. According to the Stormwater Management Report:

"The increase in impervious surfaces and subsequent increase in stormwater runoff will be mitigated and treated using drainage structures and vegetated swales that will convey runoff into two (2) separate proposed infiltration basins. The more frequent storm events will be infiltrated into the ground while the less frequent, more severe storm events will be detained in the basin

and released slowly into the existing wetlands and drainage features *to maintain the hydrology* of the area to the best extent practicable. It should be noted that any runoff that may be treated in the grass swales was not included in the water quality calculations to ensure a conservative stormwater design.” (*emphasis added*)

Therefore, based on the proposed stormwater management design, the hydrology of the wetlands, especially that of the watercourses, will be maintained in the post-construction phase.

Potential Water Quality Impacts

Stormwater runoff from impervious surfaces of residential sites has the potential of degrading the water quality (i.e., surface and groundwater) of regulated resources. Generation of potential pollutants on impervious surfaces typically results from vehicular traffic over them.

The CT-DEEP’s 2004 *Stormwater Quality Manual* (“the Manual”) is used to guide the selection, design, siting, and sizing of appropriate best management practices (BMPs), which are protective of surface and groundwater quality. The CT-DEEP has adopted, through their General Permit for discharge of stormwater, an 80% TSS (total suspended solids) minimum annual removal goal, because research has shown that the concomitant removal of other runoff constituents is high at these levels of TSS removal.

Flows generated from the proposed development, specifically the impervious surfaces associated with the roadways and house rooftops, will be intercepted and conveyed through a formal stormwater management system which includes catch basins, and two infiltration basins, preceded by water quality structures (i.e., hydrodynamic separators), which will provide significant pre-treatment prior to discharge to the basins. According to the Stormwater Management Report:

“Both stormwater infiltration basins and both associated outlet control structures were designed to infiltrate the entire 1-year storm event.”

Also, the water quality volume (WQV) *provided* at both basins is greater than the WQV *required* per the sizing calculations, using CT DEEP’s 2004 Stormwater Quality Manual (the Manual). Moreover, the stormwater management system meets the *Stream Channel Protection* sizing criterion found in the Manual. This will ensure that sufficient volume of water is retained and infiltrated in order that the receiving streams not experience prolonged bankfull conditions, which leads to bank erosion and streambed sedimentation.

Therefore, the proposed stormwater management will achieve protection of the water quality of downgradient and downstream regulated resources, both on-site as well as off-site.

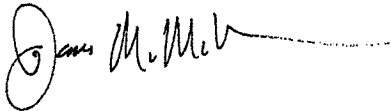
6.0 Conclusion

In conclusion, it is JMM's opinion that as proposed, and with diligent monitoring of erosion and sediment controls, the proposal will *not* have significant adverse short-term (construction) or long-term (water quality/habitat) impacts upon the regulated resources. The functions and values that are provided by the regulated resources will continued to be offered at similar levels post-development, as they are under existing conditions.

Please call us if you have any questions on the above or need further assistance.

Respectfully submitted,

JMM WETLAND CONSULTING SERVICES, LLC



James M. McManus, MS, CPSS
Certified Professional Soil Scientist (No. 15226)

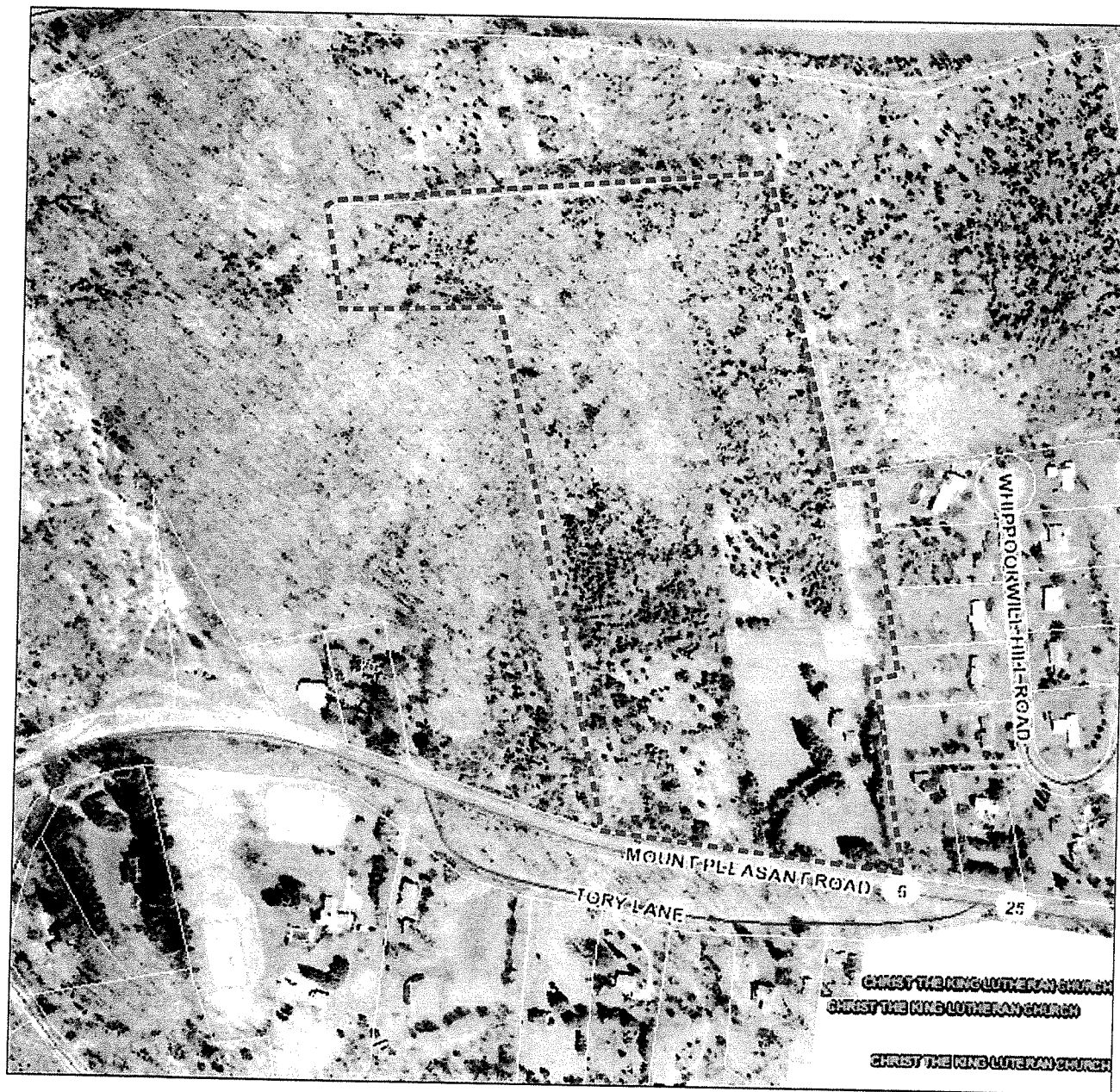
Attachments: Figure 1-3, Photos 1-8, On-Site Soil Investigation Report, NRCS Web Soil Survey Map, K-Factor Erodibility Assessment, StreamStats

FIGURE 1: 90 Mount Pleasant Road, Newtown, CT

Town GIS Aerial Photo Showing the Approximate Location of the Site's Property Boundaries.

Town of Newtown

Geographic Information System (GIS)



MAP DISCLAIMER - NOTICE OF LIABILITY

This map is for assessment purposes only. It is not for legal description or conveyances. All information is subject to verification by any user. The Town of Newtown and its mapping contractors assume no legal responsibility for the information contained herein.

Approximate Scale: 1 inch = 400 feet

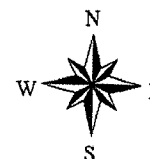
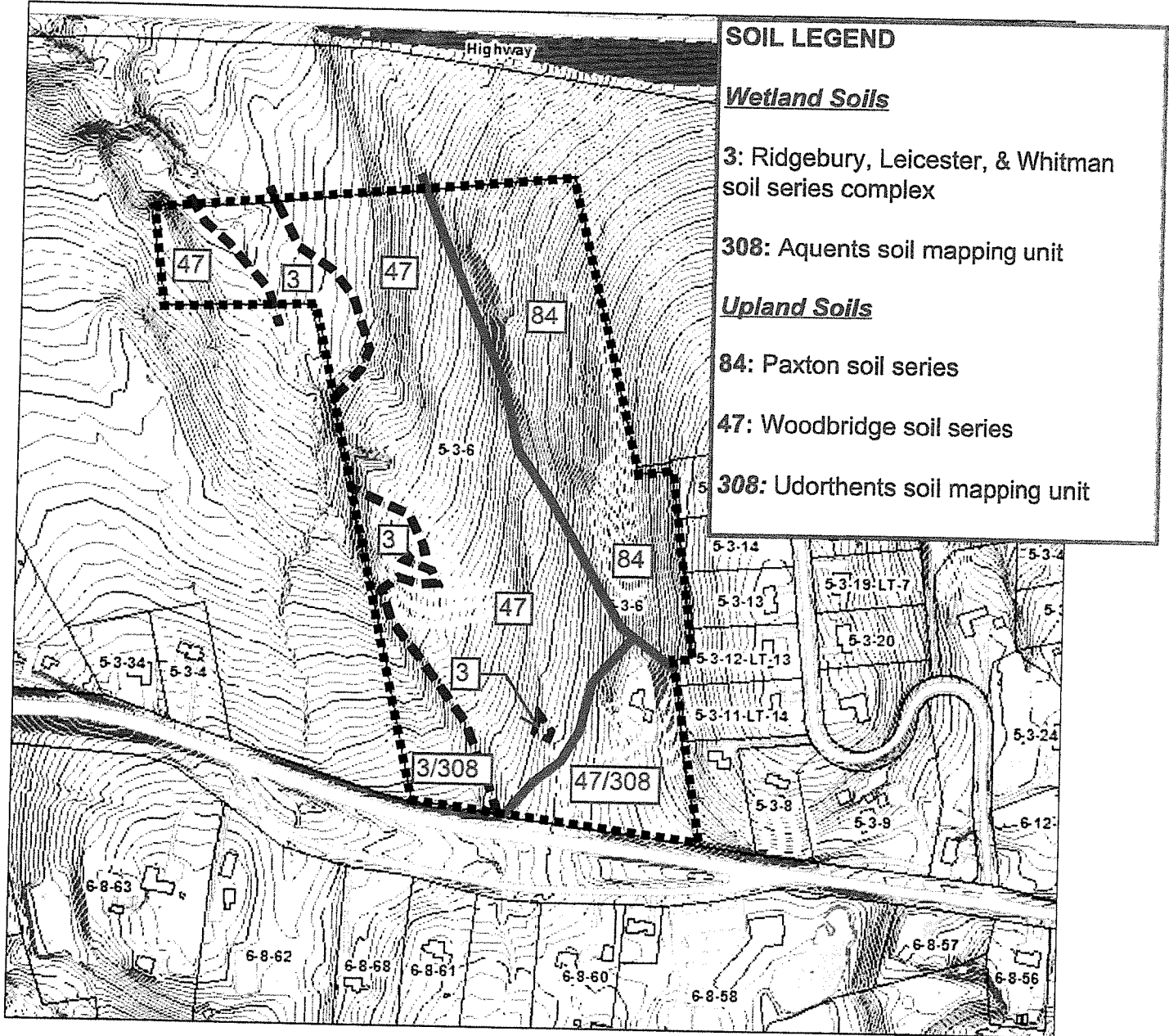


FIGURE 2: 90 Mount Pleasant Road, Newtown, CT

Town GIS Aerial Photo Showing the Approximate Location of the Site's Property Boundaries.

Town of Newtown

Geographic Information System (GIS)



SOIL LEGEND

Wetland Soils

3: Ridgebury, Leicester, & Whitman soil series complex

308: Aquents soil mapping unit

Upland Soils

84: Paxton soil series

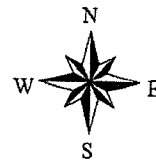
47: Woodbridge soil series

308: Udorthents soil mapping unit

MAP DISCLAIMER - NOTICE OF LIABILITY

This map is for assessment purposes only. It is not for legal description or conveyances. All information is subject to verification by any user. The Town of Newtown and its mapping contractors assume no legal responsibility for the information contained herein.

Approximate Scale: 1 Inch = 400 feet

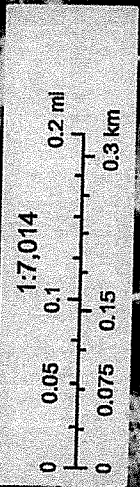




U.S. Fish and Wildlife Service

National Wetlands Inventory

FIG 3: 90 Mount Pleasant Road



March 29, 2022

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.



Photo 1: View of regulated wetlands within the southwestern part of site (JMM photo taken 7/14/2015); facing southeasterly



Photo 2: View of regulated wetlands within the southwestern part of site (JMM photo taken 7/14/2015); facing northeasterly



Photo 3: View of regulated wetlands within the southwestern part of site (JMM photo taken 3/30/2022); facing southeasterly



Photo 4: View of regulated wetlands within the northwestern part of site (JMM photo taken 3/30/2022); facing northwesterly



Photo 5: View of isolated regulated wetlands (JMM-C-series) (JMM photo taken 7/14/2015); facing southeasterly



Photo 6: View of regulated wetlands within the northwestern part of site (JMM photo taken 3/30/2022); facing southeasterly



Photo 7: View of regulated wetlands within the northwestern part of site (JMM photo taken 3/30/2022); facing northwesterly

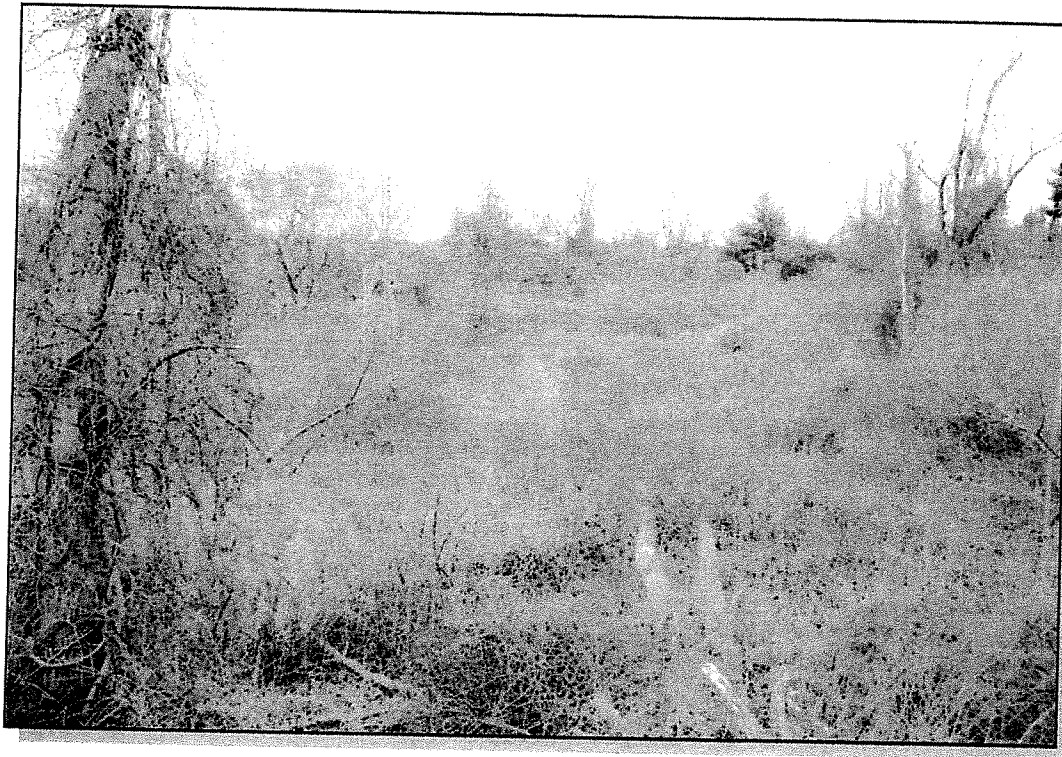


Photo 8: View of typical upland areas within the proposed development area (JMM photo taken 3/30/2022); facing northeasterly

JMM WETLAND CONSULTING SERVICES, LLC

23 Horseshoe Ridge Road
Newtown, CT 06482
Phone: 203-364-0345

REPORT DATE: July 14, 2015

PAGE 1 OF 3

ON-SITE SOIL INVESTIGATION REPORT

PROJECT NAME & SITE LOCATION:

Project Site
90 Mount Pleasant Road
Newtown, Connecticut

JMM Job No.: 15-1819-NWT-5

Field Investigation Date(s): 6/22/15

Field Investigation Method(s):

- Spade and Auger
 Backhoe Test Pits
 Other: _____

REPORT PREPARED FOR:

Mr. Vincent DeMarzo
RMS Construction, LLC
75 Camp Avenue
Stamford, CT 06907

Field Conditions:

Weather: Sunny 70's

Soil Moisture: moist

Snow Depth: N/A

Frost Depth: N/A

Purpose of Investigation:

- Wetland Delineation/Flagging in Field
 Wetland Mapping on Sketch Plan or Topographic Plan
 High Intensity Soil Mapping by Soil Scientist
 Medium Intensity Soil Mapping from SCS Soil Survey Maps
 Other: _____

Base Map Source: USDA-NRCS Connecticut Web Soil Survey (attached)

Wetland Boundary Marker Series: JMM-1 to JMM-75, JMM-A-1 to JMM-A-23, JMM-B-1 to JMM-B-14, and JMM-C-1 to JMM-C-5 (closed loop)

General Site Description/Comments: The site is located north of Mount Pleasant Road in Newtown, CT. This +/- 34.25-acre site is currently undeveloped with a mix of dense shrubby areas and forested upland and wetland areas, which include an intermittent watercourse (see Figures 1-2, attached). The soil types were found to be both undisturbed and disturbed. The disturbed soils were observed mainly in the southern portions of the site adjacent to the Mount Pleasant Road and in the vicinity of the recently removed single-family residence. The undisturbed soils are derived from glacial till (i.e. unstratified sand, silt, and rock) deposits. The undisturbed upland soils are comprised of the well-drained Paxton (84) soil series and the moderately well drained Woodbridge (47) soil series. The disturbed upland soils were mapped as the Udorthents (308) mapping unit while any disturbed wetland soils were mapped as the Aquents (308w) mapping unit. The undisturbed wetland soils were identified as the poorly to very poorly drained Ridgebury, Leicester, and Whitman (3) soil series complex. The regulated areas associated with the site consist of an intermittent watercourse and its associated wooded swamp located along the southwestern and northwestern parts of the site (JMM-#/A/B-series) and a very small isolated scrub-shrub swamp located in the southern portion (JMM-C-series). Typical vegetation observed within the regulated areas included such species as red maple, American elm, yellow birch, Japanese barberry, multiflora rose, honeysuckle, silky dogwood, autumn olive, skunk cabbage, soft rush, sensitive fern, jewelweed, tussock sedges, fringe sedge, Canada mayflower, stinging nettle, Asiatic bittersweet, goldenrods, and poison ivy, to name a few.

ON-SITE SOIL INVESTIGATION REPORT (CONTINUED)

PROJECT NAME & SITE LOCATION: Project Site
90 Mount Pleasant Road, Newtown, CT

SOIL MAP UNITS**Wetland Soils**

Ridgebury fine sandy loam (3). This soil series consists of deep, poorly and somewhat poorly drained soils formed in a coarse-loamy mantle underlain by firm, compact glacial till on uplands. They are nearly level to moderately steep soils on till plains, low ridges and drumloidal landforms. The soils formed in acid glacial till derived mainly from schist, gneiss or granite. Typically these soils have a black sandy loam surface layer 6 inches thick. The mottled subsoil from 6 to 16 inches is olive gray sandy loam. The mottled substratum from 16 to 60 inches is a light olive brown and olive, very firm and brittle gravelly sandy loam.

Leicester fine sandy loam (3). This series, which is some Connecticut counties is found only in complex with the Ridgebury and Whitman series, consists of deep, poorly drained loamy soils formed in friable glacial till on uplands. They are nearly level to gently sloping soils in drainage ways and low-lying positions on till covered uplands. The soils formed in acid glacial till derived mainly from schist, gneiss or granite. Typically, these soils have a surface layer of black fine sandy loam 6 inches thick. The subsoil from 6 to 23 inches is grayish brown, mottled fine sandy loam. The substratum from 26 to 60 inches or more is dark yellowish brown, mottled, friable, gravelly fine sandy loam.

Whitman fine sandy loam (3). This series, which is some Connecticut counties is only mapped in complex with the Ridgebury and Leicester series, consists of deep, very poorly drained soils formed in a coarse-loamy mantle underlain by firm, compact glacial till on uplands. They are nearly level and gently sloping soils on till plains, low ridges and drumloidal landforms. The soils formed in acid glacial till derived mainly from schist, gneiss or granite. Typically these soils have a black fine sandy loam surface layer 8 inches thick. The mottled subsoil from 8 to 15 inches is gray sandy loam. The mottled substratum from 15 to 60 inches is firm, olive gray to gray dense glacial till.

Aquents (308). This soil map unit consists of poorly drained and very poorly drained disturbed land areas. They are most often found on landscapes, which have been subject to prior filling and/or excavation activities. In general, this soil map unit occurs where two or more feet of the original soil surface has been filled over, graded or excavated. The *Aquents* are characterized by a seasonal to prolonged high ground water table and either support or are capable of supporting wetland vegetation. *Aquents* are recently formed soils, which have an aquic moisture regime. An aquic moisture regime is associated with a reducing soil environment that is virtually free of dissolved oxygen because the soil is saturated by groundwater or by water of the capillary fringe. The key feature is the presence of a ground water table at or very near to the soil surface for a period of fourteen days or longer during the growing season.

Upland Soils

Paxton fine sandy loam (84). This series consists of deep, well drained soils formed in a coarse-loamy mantle underlain by firm, compact glacial till on uplands. They are nearly level to very steep soils on till plains, low ridges and drumloidal landforms. The soils formed in acid glacial till derived mainly from schist, gneiss or granite. In tilled areas, these soils have a dark brown fine sandy loam surface layer 8 inches thick. The subsoil from 8 to 26 inches is dark yellowish brown and olive brown fine sandy loam. The substratum from 26 to 60 inches is olive, very firm and brittle gravelly fine sandy loam.

ON-SITE SOIL INVESTIGATION REPORT (CONTINUED)

PROJECT NAME & SITE LOCATION: Project Site
90 Mount Pleasant Road, Newtown, CT

SOIL MAP UNITS

Woodbridge fine sandy loam (47). This series consists of deep, moderately well drained soils formed in a coarse-loamy mantle underlain by firm, compact glacial till on uplands. They are nearly level to moderately steep soils on till plains, low ridges and drumloidal landforms. The soils formed in acid glacial till derived mainly from schist, gneiss or granite. In tilled areas, these soils typically have a very dark grayish brown fine sandy loam surface layer 7 inches thick. The subsoil from 7 to 30 inches is dark yellowish brown and light olive brown fine sandy loam, mottled below 18 inches. The substratum from 30 to 60 inches is light olive brown, very firm and brittle gravelly fine sandy loam.

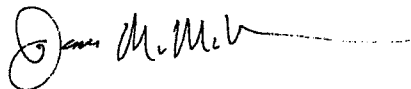
Udorthents (308). This soil mapping unit consists of well drained to moderately well drained soils that have been altered by cutting, filling, or grading. The areas either have had two feet or more of the upper part of the original soil removed or have more than two feet of fill material on top of the original soil. *Udorthents* or Made Land soils can be found on any soil parent material but are typically fluvial on glacial till plains and outwash plains and stream terraces.

Any accompanying soil logs and soil maps, and the on-site soil investigation narrative are in accordance with the taxonomic classification of the National Cooperative Soil Survey of the USDA Natural Resource Conservation Service, and with the Connecticut Soil Legend (DEP Bulletin No.5, 1983). Jurisdictional wetland boundaries were delineated pursuant to the Connecticut General Statutes (CGS Sections 22a-36 to 22a-45), as amended. The site investigation was conducted and/or reviewed by the undersigned Registered Soil Scientist(s) [registered with the Society of Soil Scientists of Southern New England (SSSSNE) in accordance with the standards of the Federal Office of Personnel Management].

All wetland boundary lines established by the undersigned Soil Scientist are subject to change until officially adopted by, local, state, and federal regulatory agencies.

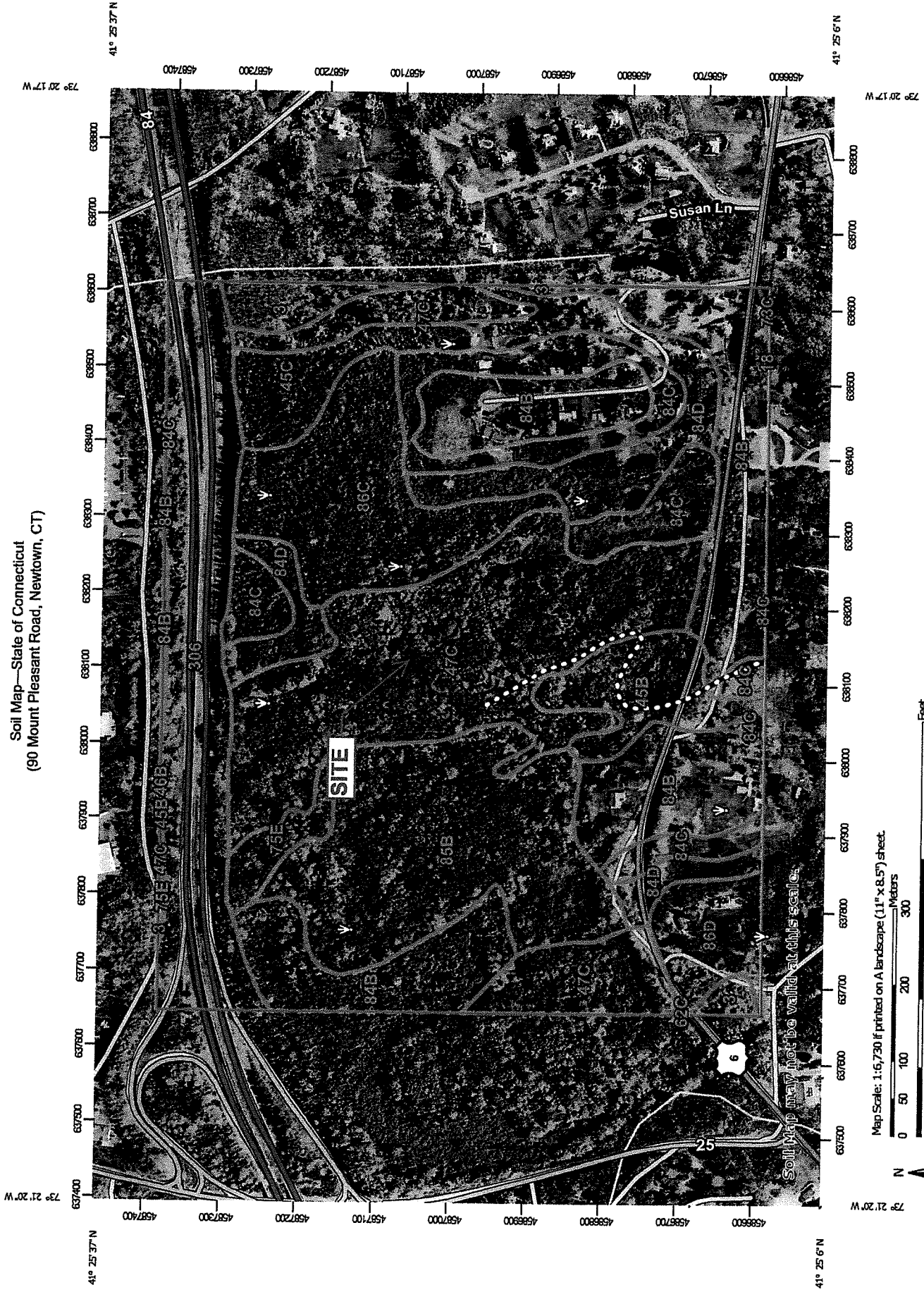
Respectfully submitted,

JMM WETLAND CONSULTING SERVICES, LLC



James M. McManus, MS, CPSS
Certified Professional Soil Scientist
Field Investigator/Reviewer

Soil Map—State of Connecticut
 (90 Mount Pleasant Road, Newtown, CT)



SITE

Soil Map may not be valid at this scale.

Map Scale: 1:6,730 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

- Area of Interest (AOI)
- Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points
- Special Point Features**
 - Blowout
 - Borrow Pit
 - Clay Spot
 - Closed Depression
 - Gravel Pit
 - Gravelly Spot
 - Landfill
 - Lava Flow
 - Marsh or swamp
 - Mine or Quarry
 - Miscellaneous Water
 - Perennial Water
 - Rock Outcrop
 - Saline Spot
 - Sandy Spot
 - Severely Eroded Spot
 - Sinkhole
 - Slide or Slip
 - Sodic Spot
- Spot Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features
- Water Features**
 - Streams and Canals
- Transportation**
 - Rails
 - Interstate Highways
 - US Routes
 - Major Roads
 - Local Roads
- Background**
 - Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: State of Connecticut
 Survey Area Data: Version 21, Sep 7, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

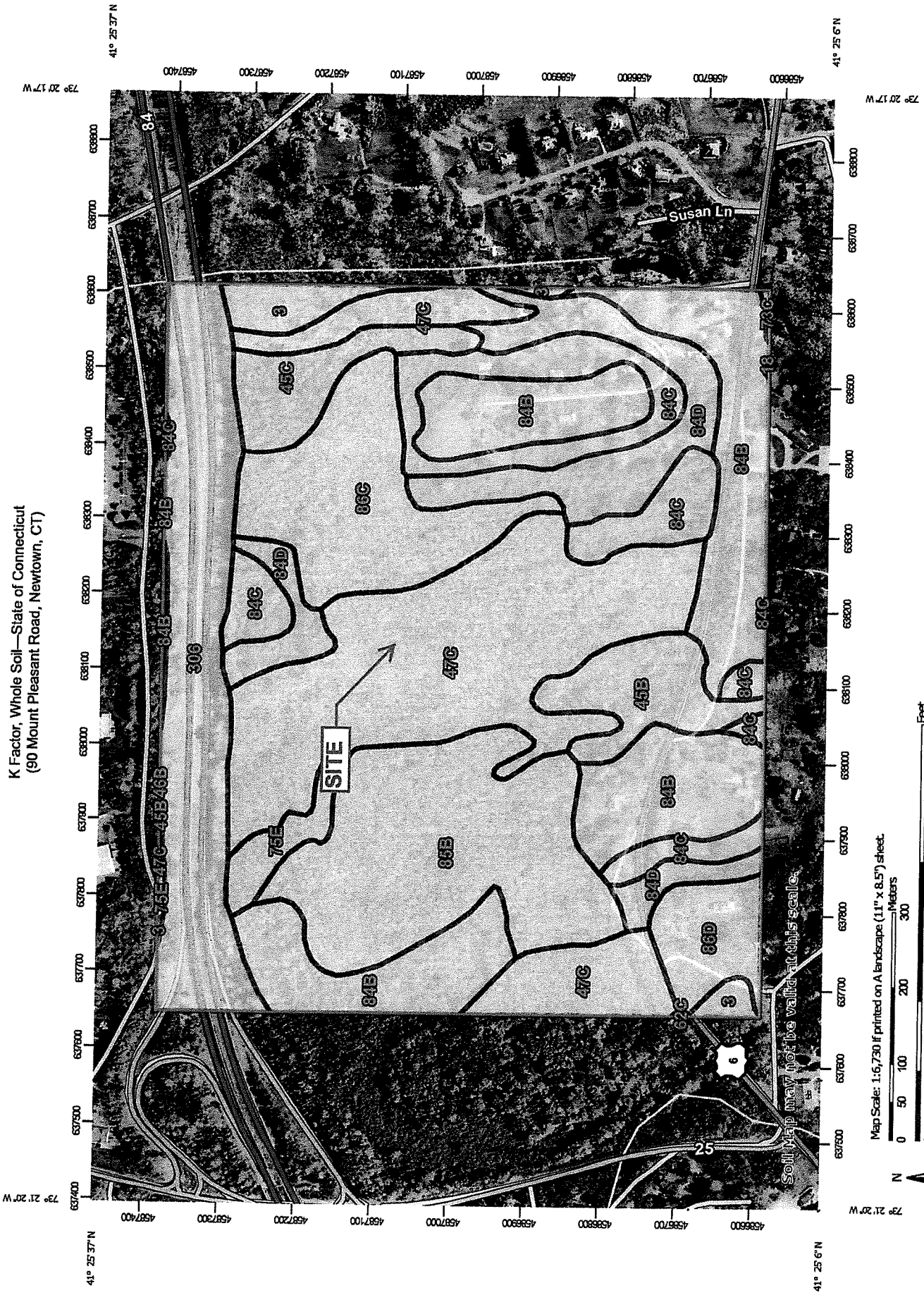
Date(s) aerial images were photographed: Oct 5, 2018—Oct 14, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
3	Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony	3.5	1.8%
18	Catden and Freetown soils, 0 to 2 percent slopes	0.0	0.0%
45B	Woodbridge fine sandy loam, 3 to 8 percent slopes	6.5	3.4%
45C	Woodbridge fine sandy loam, 8 to 15 percent slopes	5.4	2.8%
46B	Woodbridge fine sandy loam, 0 to 8 percent slopes, very stony	0.0	0.0%
47C	Woodbridge fine sandy loam, 3 to 15 percent slopes, extremely stony	39.9	21.0%
62C	Canton and Charlton fine sandy loams, 3 to 15 percent slopes, extremely stony	0.0	0.0%
73C	Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky	0.1	0.1%
75E	Hollis-Chatfield-Rock outcrop complex, 15 to 45 percent slopes	2.7	1.4%
84B	Paxton and Montauk fine sandy loams, 3 to 8 percent slopes	35.3	18.6%
84C	Paxton and Montauk fine sandy loams, 8 to 15 percent slopes	15.6	8.2%
84D	Paxton and Montauk fine sandy loams, 15 to 25 percent slopes	14.5	7.7%
85B	Paxton and Montauk fine sandy loams, 3 to 8 percent slopes, very stony	24.3	12.8%
86C	Paxton and Montauk fine sandy loams, 3 to 15 percent slopes, extremely stony	15.6	8.2%
86D	Paxton and Montauk fine sandy loams, 15 to 35 percent slopes, extremely stony	4.9	2.6%
306	Udorthents-Urban land complex	21.6	11.4%
Totals for Area of Interest		190.0	100.0%

K Factor, Whole Soil—State of Connecticut
(90 Mount Pleasant Road, Newtown, CT)



Map Scale: 1:6,750 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

MAP LEGEND

Area of Interest (AOI)
 Area of Interest (AOI)

Soils

Soil Rating Polygons

- .02
- .05
- .10
- .15
- .17
- .20
- .24
- .28
- .32
- .37
- .43
- .49
- .55
- .64
- Not rated or not available

Soil Rating Lines

- .02
- .05
- .10
- .15
- .17
- .20
- Not rated or not available

Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: State of Connecticut
 Survey Area Data: Version 21, Sep 7, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 5, 2018—Oct 14, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Water Features

K Factor, Whole Soil

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
3	Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony		3.5	1.8%
18	Catden and Freetown soils, 0 to 2 percent slopes		0.0	0.0%
45B	Woodbridge fine sandy loam, 3 to 8 percent slopes	.28	6.5	3.4%
45C	Woodbridge fine sandy loam, 8 to 15 percent slopes	.28	5.4	2.8%
46B	Woodbridge fine sandy loam, 0 to 8 percent slopes, very stony		0.0	0.0%
47C	Woodbridge fine sandy loam, 3 to 15 percent slopes, extremely stony		39.9	21.0%
62C	Canton and Charlton fine sandy loams, 3 to 15 percent slopes, extremely stony		0.0	0.0%
73C	Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky		0.1	0.1%
75E	Hollis-Chatfield-Rock outcrop complex, 15 to 45 percent slopes		2.7	1.4%
84B	Paxton and Montauk fine sandy loams, 3 to 8 percent slopes	.28	35.3	18.6%
84C	Paxton and Montauk fine sandy loams, 8 to 15 percent slopes	.28	15.6	8.2%
84D	Paxton and Montauk fine sandy loams, 15 to 25 percent slopes	.28	14.5	7.7%
85B	Paxton and Montauk fine sandy loams, 3 to 8 percent slopes, very stony		24.3	12.8%
86C	Paxton and Montauk fine sandy loams, 3 to 15 percent slopes, extremely stony		15.6	8.2%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
86D	Paxton and Montauk fine sandy loams, 15 to 35 percent slopes, extremely stony		4.9	2.6%
306	Udorthents-Urban land complex	.32	21.6	11.4%
Totals for Area of Interest			190.0	100.0%

Description

Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and saturated hydraulic conductivity (Ksat). Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

"Erosion factor Kw (whole soil)" indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Factor K does not apply to organic horizons and is not reported for those layers.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Layer Options (Horizon Aggregation Method): Surface Layer (Not applicable)

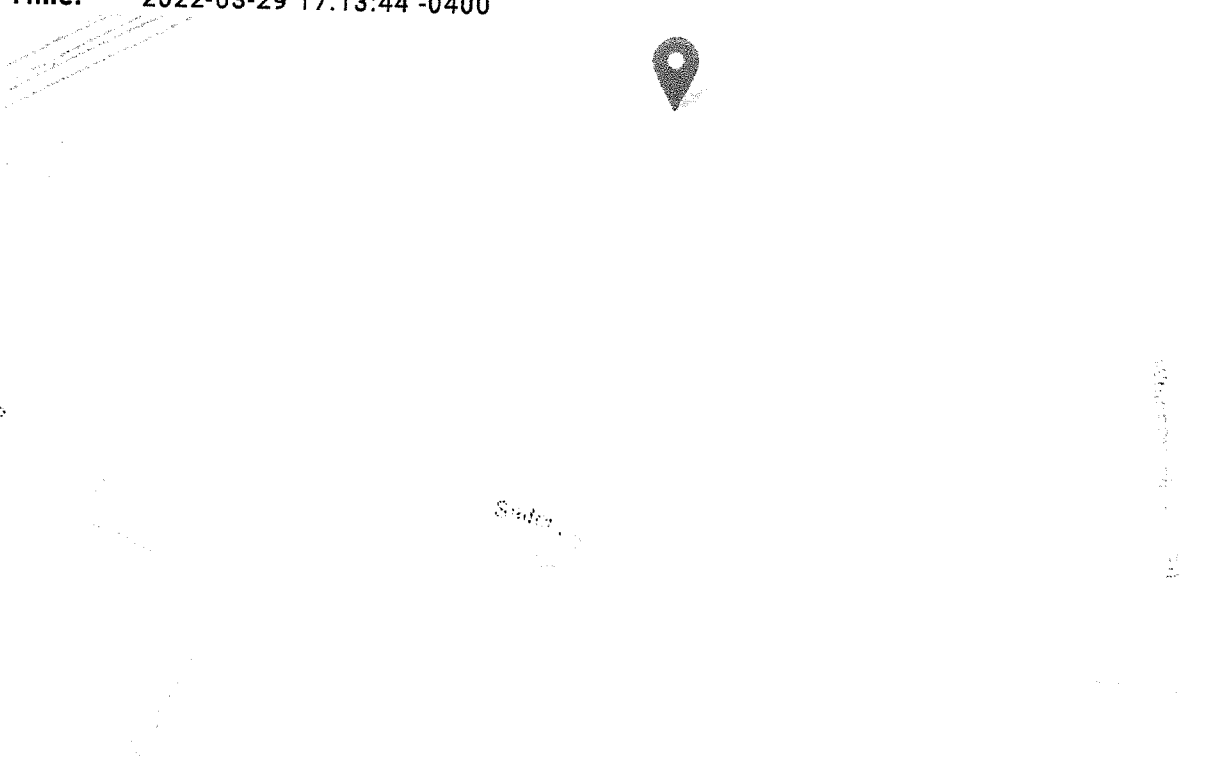
StreamStats Report

Region ID: CT

Workspace ID: CT20220329211318728000

Clicked Point (Latitude, Longitude): 41.42431, -73.34863

Time: 2022-03-29 17:13:44 -0400



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
LC11DEV	Percentage of developed (urban) land from NLCD 2011 classes 21-24	20	percent
LC11IMP	Average percentage of impervious area determined from NLCD 2011 impervious dataset	3.02	percent
WETLAND	Percentage of Wetlands	0	percent

USGS Data Disclaimer: Unless otherwise stated, all data, metadata and related materials are considered to satisfy the

quality standards relative to the purpose for which the data were collected. Although these data and associated metadata have been reviewed for accuracy and completeness and approved for release by the U.S. Geological Survey (USGS), no warranty expressed or implied is made regarding the display or utility of the data for other purposes, nor on all computer systems, nor shall the act of distribution constitute any such warranty.

USGS Software Disclaimer: This software has been approved for release by the U.S. Geological Survey (USGS). Although the software has been subjected to rigorous review, the USGS reserves the right to update the software as needed pursuant to further analysis and review. No warranty, expressed or implied, is made by the USGS or the U.S. Government as to the functionality of the software and related material nor shall the fact of release constitute any such warranty. Furthermore, the software is released on condition that neither the USGS nor the U.S. Government shall be held liable for any damages resulting from its authorized or unauthorized use.

USGS Product Names Disclaimer: Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

Application Version: 4.8.1

StreamStats Services Version: 1.2.22

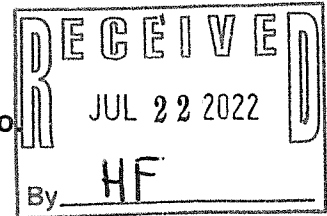
NSS Services Version: 2.1.2

**NEWTOWN INLAND WETLAND COMMISSION
NEWTOWN, CT**

In the matter of:

Date: July ²², 2022

**APPLICATION FOR IW Application 90 Mount Pleasant Rd.,
the subject of this proceeding,
Newtown Commons, 90 Mount Pleasant Rd. by Farrell Building Co**



VERIFIED PETITION TO INTERVENE

Pursuant to Section 22a-19 et seq. of the Connecticut General Statutes, the undersigned Patrick Napolitano, a taxpayer of Newtown, Connecticut, owning land at of 13 Whippoorwill Hill Rd., Newtown, CT is concerned with environmental integrity of the land, wetlands, aquifer and quality of life in Newtown, applies to become an intervening party in the above-entitled administrative proceeding, and represents as follows:

The subject administrative proceedings (the "Application") involves a hearing before the Inland Wetlands Commission of the Town of Newtown an Application for Resident AH apartments submitted by Farrell Building Company regarding property located at 90 Mount Pleasant Rd. in Newtown, Connecticut, the subject of this proceeding., which Application was received on July 7th, 2022.

1. This administrative proceeding involves conduct which has or which is reasonably likely to have, the effect of unreasonably polluting, impairing or destroying the public trust in the water, wetlands and other natural resources of the state in the following ways:
 - a. The Application proposes a significant increase in intensity of the use of the Property, anticipating 12 structures for 220 apartments, over 200 parking spaces, circular road with one entrance/exit. Many of these are harmful to health & safety of the community. The Applicant's site plan establishes an inadequate distance between the proposed activity and local residents. This will unnecessarily endanger the public health due to the property has extensive wetlands and an unnamed tributary of Pond Brook which is a local aquifer in the area giving water to 100's of homes in the area.

- b. The property is graded and sloped down toward the unnamed tributary and scaling down the land can cause problems to the surrounding soils and watershed area.
2. There is a feasible and prudent alternative to the proposed development including, but not limited to: (a) significantly decreasing the size of the proposed development area; (b) preserving the land in its natural state.
3. The Connecticut Environmental Protection Act of 1971 provides, in part, that any person may intervene as of right in any administrative proceeding upon the filing of a verified pleading asserting that the proceeding "involves conduct which has, or which is reasonably likely to have, the effect of unreasonably polluting, impairing or destroying the public trust in the air, water or other natural resources of the State". C.G.S. Section 22a-19(a).
4. It is the responsibility of the Applicant in these administrative proceedings to adequately develop by the introduction of substantial evidence of record, evidence that will address the issues raised herein with respect to the potential impacts, and the Applicant has the burden of establishing that the proposed action will not have such significant adverse impact as alleged and that no alternatives exist that would reduce or eliminate the potential for such adverse impacts.
5. Pursuant to C.G.S. 22a-19, et. seq., the undersigned requests all rights of participation granted to any party in accordance with the provisions thereto.
6. This request for intervention with party status will further the policies and purposes of the Connecticut Environmental Protection Act. (C.G.S. 22a-19, et. seq.).
7. The Application involves a hearing before the Inland Wetland Commission of the Town of Newtown regarding and Application known as Newtown Commons, 90 Mt. Pleasant Rd, Newtown, CT which Application was received on July 7th, 2022 and the petitioner's intervention will advance the public interest with regard to the protection of the natural resources of the State.
8. The Intervening Petitioner, pursuant to the provisions of C.G.S. Section 1-21c, hereby requests that it be given written notice by mail of all hearings and meetings to

be held in connection with this proceeding as well as all negotiations pertaining to the above captioned application.

Applicable Law:

A. CEPA Allows Any Person To Intervene In Legal Proceedings to Raise Environmental Issues

As noted above, this Application is made pursuant to CEPA, the plain language of which was intended to provide wide access to the states' various tribunals. Red Hill Coalition, Inc. v. Conservation Commission of Town of Glastonbury, 212 Conn. 710 (1989).

The statute provides in relevant part:

“[in] any administrative, licensing or other proceeding, and in any judicial review thereof made available by law,any person ...or other legal entity may intervene as a party on the filing of a verified pleading asserting that the proceeding or action for judicial review involves conduct which has, or which is reasonably likely to have, the effect of unreasonably polluting, impairing or destroying the public trust in the air, water or other natural resources of the state.”

§22a-19 (emphasis added).

Unlike a classical zoning case, a §22a-19 or 22a-19 intervenor need not show “aggrievement”. Hyllen-Davey v. Planning & Zoning Commission, 57 Conn. App. 598, 593, 749 A.2d 682, cert denied, 253 Conn. 926, 754 A.2d 796 (2000)(“the EPA waives the additional aggrievement requirement in ... §22a-19, [which] authorizes any citizen or other entity, without having to first establish aggrievement, to intervene in an existing proceeding.”); Scaringe v. Meriden Planning & Zoning Comm, CV-000274515-S, J.D. at Meriden, (November 26, 2002)(Gilardi, J).

An allegation of facts that the action at issue in the proceeding is likely to unreasonably impair the public trust in natural or historical resources of the State is sufficient. See, Cannata v. Dept. Of Environmental Protection, et al, 239 Conn. 124 (1996)(alleging harm to floodplain forest resources).

B. CEPA Is Not Discretionary: Once A Verified Application Has Been Filed,

Intervention Is A Matter of Statutory Right

The Connecticut Appellate Court has noted that statutes “such as the EPA are remedial in nature and should be liberally construed to accomplish their purpose.” Avalon Bay Communities, Inc. v. Zoning Commission of the Town of Stratford, 87 Conn.App.537 (2005); Keeney v. Fairfield Resources, Inc., 41 Conn. App. 120, 132-33, 674 A.2d1349 (1996). In Red Hill Coalition, Inc. V. Town Planning & Zoning Commission, 212 Conn. 7272, 734, 563 A.2d 1347

(1989)http://www.lexis.com/research/buttonTFLink?_m=6fe21985f9db773cdfb73b16f8141bf5&_xfercite=%3ccite%20cc%3d%22USA%22%3e%3c%21%5bCDATA%5b87%20Conn.%20App.%20537%5d%5d%3e%3c%2fcite%3e&_butType=3&_butStat=2&_butNum=53&_butInline=1&_butinfo=%3ccite%20 (“section 22a-19

http://www.lexis.com/research/buttonTFLink?_m=6fe21985f9db773cdfb73b16f8141bf5&_xfercite=%3ccite%20cc%3d%22USA%22%3e%3c%21%5bCDATA%5b87%20Conn.%20App.%20537%5d%5d%3e%3c%2fcite%3e&_butType=4&_butStat=0&_butNum=54&_butInline=1&_butinfo=CONN.%20GE makes intervention a matter of right once a verified pleading is filed complying with the statute, whether or not those allegations ultimately prove to be unfounded”); Polymer Resources, Ltd. V. Keeney, 32 Conn. App. 340, 348-49, 629 A.2d 447 (1993) (“[Section] 22a-19[a]http://www.lexis.com/research/buttonTFLink?_m=6fe21985f9db773cdfb73b16f8141bf5&_xfercite=%3ccite%20cc%3d%22USA%22%3e%3c%21%5bCDATA%5b87%20Conn.%20App.%20537%5d%5d%3e%3c%2fcite%3e&_butType=4&_butStat=0&_butNum=56&_butInline=1&_butinfo=CONN.%20GE compels a trial court to permit intervention in an administrative proceeding or judicial review of such a proceeding by a party seeking to raise environmental issues upon the filing of a verified complaint. The statute is therefore not discretionary.”) See Also, Connecticut Fund for the Environment, Inc. V. Stamford, 192 Conn. 247, 248 n.2, 470 A.2d 1214 (1984).

In Mystic Marinelife Aquarium v. Gill, 175 Conn. 483, 490, 400 A.2d 726 (1978), we concluded that one who filed a verified pleading under § 22a-19 (a) became a party to an

administrative proceeding upon doing so and had "statutory standing to appeal for the limited purpose of raising environmental issues." "It is clear that one basic purpose of the act is to give persons standing to bring actions to protect the environment." Belford v. New Haven, 170 Conn. 46, 53-54, 364 A.2d 194 (1975).

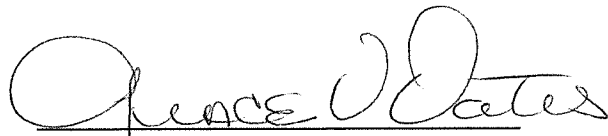
This Application makes specific verified allegations of unreasonable impairment of natural resources, *inter alia*: The protection of wetlands, the local wells and aquifer. The use described in this Application known as Newtown Commons damages the surrounding soils, watershed area and the unnamed tributary of Pond Brook; thus, the undersigned party intervenes in this proceeding on the filing of this Verified Notice of Intervention and requests notice of all meetings.



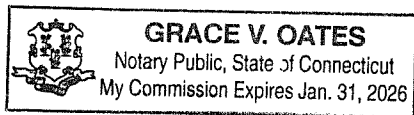
Patrick Napolitano

STATE OF CONNECTICUT :
 Fairfield : ss: Newtown
COUNTY OF DANBURY : :

On this 22 day of July, 2022 personally appeared Patrick Napolitano of 13 Whippoorwill Hill Rd., Newtown, Connecticut, and made oath to the truth of the matters contained in the foregoing application, before me.



Notary Public
Commissioner of the Superior Court



IWC mtg.
7-27-22
2.7.

**NEWTOWN INLAND WETLAND COMMISSION
NEWTOWN, CT**

In the matter of: IW Application #22-14

Date: July 27th, 2022

APPLICATION FOR IW Application 90 Mount Pleasant Rd.,
the subject of this proceeding,
Newtown Commons, 90 Mount Pleasant Rd. by Farrell Building Co.

VERIFIED PETITION TO INTERVENE

Pursuant to Section 22a-19 et seq. of the Connecticut General Statutes, the undersigned Mark D'Amico, a taxpayer and resident of Newtown, Connecticut, owning land at 7 Tory Lane, Newtown, CT is concerned with environmental integrity of the land, wetlands, aquifer and quality of life in Newtown, applies to become an intervening party in the above-entitled administrative proceeding, and represents as follows:

The subject administrative proceedings (the "Application") involves a hearing before the Inland Wetlands Commission of the Town of Newtown an Application (IW Application #22-14) for Residential apartments submitted by Farrell Building Company regarding property located at 90 Mount Pleasant Rd. in Newtown, Connecticut, the subject of this proceeding, which Application was received on July 7th, 2022.

1. This administrative proceeding involves conduct which has or which is reasonably likely to have, the effect of unreasonably polluting, impairing or destroying the public trust in the water, wetlands and other natural resources of the state in the following ways:
 - a. The Application proposes a significant increase in intensity of the use of the Property, anticipating 12 structures for 220 apartments, over 200 parking spaces, circular road with one entrance/exit. Many of these are harmful to health & safety of the community. The Applicant's site plan establishes an inadequate distance between the proposed activity and local residents. This will unnecessarily endanger the public health due to the property has extensive wetlands and an unnamed tributary eventually joining Pond Brook, which is a local aquifer in the area giving water to 100's of homes in the area.

- b. The property is graded and sloped down toward the unnamed tributary and scaling down the land can cause problems to the surrounding soils and watershed area.
2. There is a feasible and prudent alternative to the proposed development including, but not limited to: (a) significantly decreasing the size of the proposed development area; (b) preserving the land in its natural state.
3. The Connecticut Environmental Protection Act of 1971 provides, in part, that any person may intervene as of right in any administrative proceeding upon the filing of a verified pleading asserting that the proceeding "involves conduct which has, or which is reasonably likely to have, the effect of unreasonably polluting, impairing or destroying the public trust in the air, water or other natural resources of the State". C.G.S. Section 22a-19(a).
4. It is the responsibility of the Applicant in these administrative proceedings to adequately develop by the introduction of substantial evidence of record, evidence that will address the issues raised herein with respect to the potential impacts, and the Applicant has the burden of establishing that the proposed action will not have such significant adverse impact as alleged and that no alternatives exist that would reduce or eliminate the potential for such adverse impacts.
5. Pursuant to C.G.S. 22a-19, et. seq., the undersigned requests all rights of participation granted to any party in accordance with the provisions thereto.
6. This request for intervention with party status will further the policies and purposes of the Connecticut Environmental Protection Act. (C.G.S. 22a-19, et. seq.).
7. The Application involves a hearing before the Inland Wetland Commission of the Town of Newtown regarding and Application known as Newtown Commons, 90 Mt. Pleasant Rd, Newtown, CT which Application was received on July7th, 2022 and the petitioner's intervention will advance the public interest with regard to the protection of the natural resources of the State.
8. The Intervening Petitioner, pursuant to the provisions of C.G.S. Section 1-21c, hereby requests that it be given written notice by mail of all hearings and meetings to

be held in connection with this proceeding as well as all negotiations pertaining to the above captioned application.

Applicable Law:

A. CEPA Allows Any Person to Intervene In Legal Proceedings to Raise Environmental Issues

As noted above, this Application is made pursuant to CEPA, the plain language of which was intended to provide wide access to the states' various tribunals. Red Hill Coalition, Inc. v. Conservation Commission of Town of Glastonbury, 212 Conn. 710 (1989).

The statute provides in relevant part:

“[in] any administrative, licensing or other proceeding, and in any judicial review thereof made available by law, ...any person ...or other legal entity may intervene as a party on the filing of a verified pleading asserting that the proceeding or action for judicial review involves conduct which has, or which is reasonably likely to have, the effect of unreasonably polluting, impairing or destroying the public trust in the air, water or other natural resources of the state.”

§22a-19 (emphasis added).

Unlike a classical zoning case, a §22a-19 or 22a-19 intervenor need not show “aggrievement”. Hyllen-Davey v. Planning & Zoning Commission, 57 Conn. App. 598, 593, 749 A.2d 682, cert denied, 253 Conn. 926, 754 A.2d 796 (2000)(“the EPA waives the additional aggrievement requirement in ... §22a-19, [which] authorizes any citizen or other entity, without having to first establish aggrievement, to intervene in an existing proceeding.”); Scaringe v. Meriden Planning & Zoning Comm, CV-000274515-S, J.D. at Meriden, (November 26, 2002)(Gilardi, J).

An allegation of facts that the action at issue in the proceeding is likely to unreasonably impair the public trust in natural or historical resources of the State is sufficient. See, Cannata v. Dept. Of Environmental Protection, et al, 239 Conn. 124 (1996) (alleging harm to floodplain forest resources).

B. CEPA Is Not Discretionary: Once A Verified Application Has Been Filed,

Intervention Is A Matter of Statutory Right

The Connecticut Appellate Court has noted that statutes “such as the EPA are remedial in nature and should be liberally construed to accomplish their purpose.” Avalon Bay Communities, Inc. v. Zoning Commission of the Town of Stratford, 87 Conn.App.537 (2005); Keeney v. Fairfield Resources, Inc., 41 Conn. App. 120, 132-33, 674 A.2d1349 (1996). In Red Hill Coalition, Inc. V. Town Planning & Zoning Commission, 212 Conn. 7272, 734, 563 A.2d 1347

(1989)http://www.lexis.com/research/buttonTFLink?_m=6fe21985f9db773cdfb73b16f8141bf5&_xfercite=%3ccite%20cc%3d%22USA%22%3e%3c%21%5bCDATA%5b87%20Conn.%20App.%20537%5d%5d%3e%3c%2fcite%3e&_butType=3&_butStat=2&_butNum=53&_butInline=1&_butinfo=%3ccite%20 (“section 22a-19

http://www.lexis.com/research/buttonTFLink?_m=6fe21985f9db773cdfb73b16f8141bf5&_xfercite=%3ccite%20cc%3d%22USA%22%3e%3c%21%5bCDATA%5b87%20Conn.%20App.%20537%5d%5d%3e%3c%2fcite%3e&_butType=4&_butStat=0&_butNum=54&_butInline=1&_butinfo=CONN.%20GE makes intervention a matter of right once a verified pleading is filed complying with

the statute, whether or not those allegations ultimately prove to be unfounded”); Polymer Resources, Ltd. V. Keeney, 32 Conn. App. 340, 348-49, 629 A.2d 447 (1993) (“[Section] 22a-19[a]

http://www.lexis.com/research/buttonTFLink?_m=6fe21985f9db773cdfb73b16f8141bf5&_xfereite=%3ccite%20cc%3d%22USA%22%3e%3c%21%5bCDATA%5b87%20Conn.%20App.%20537%5d%5d%3e%3c%2fcite%3e&_butType=4&_butStat=0&_butNum=56&_butInline=1&_butinfo=CONN.%20GE *compels a trial court to permit intervention in an administrative proceeding or*

judicial review of such a proceeding by a party seeking to raise environmental issues upon the filing of a verified complaint. The statute is therefore not discretionary.”) See Also, Connecticut Fund for the Environment, Inc. V. Stamford, 192 Conn. 247, 248 n.2, 470 A.2d 1214 (1984).

In Mystic Marinelife Aquarium v. Gill, 175 Conn. 483, 490, 400 A.2d 726 (1978), we concluded that one who filed a verified pleading under § 22a-19 (a) became a party to an

IWC mtg
7-27-22
R.F.

Good Evening Commission Members, and my fellow neighbors of Newtown. My name is Michael Criscuolo, I am an attorney, a recent retiree of the Connecticut Army National Guard, and a resident of Newtown, CT.

I respectfully request that you, the Inland Wetlands Commission, consider the following points and questions regarding application #22-14 to determine compliance/adherence to IWC regulation 1.1; to protect and preserve natural habitats, minimize pollution, protect the water supply, prevent damage to the environment through erosion, as well as protecting wildlife and vegetation.

1. First, has an adequate and complete independent wetlands impact study been conducted that can be used to justify or support this proposed development and activity? If a new assessment of this activity/proposal is needed, the Commission is permitted to request such an assessment per regulation 8.9. Under the proposed plan of this application, I believe the Commission would be wise to ensure a full independent assessment is completed, because without such an assessment the Commission cannot make an informed decision that complies with regulation 1.1
2. Second, this proposal as it currently stands is oversized; and borders and encroaches on wetlands that lead to the watershed. Has this proposal been evaluated to harmonize with state regulations to ensure no violations?
3. Next, this site borders wetlands, this project will require significant site prep, which will require tons of soil to be removed to level the steep contours. This proposal will also require significant blasting deep underground. Once this blasting is completed, the ground level of the new buildings appear to be at the same level as the well depth of abutting properties. This appears to threaten and pose a high risk of pinching off water veins to residential wells. In addition, this Commission should consider the impact on abutting properties with septic systems that may be adversely affected with the amount of blasting that will be required, potentially contaminating the wetland area and the Aquafer, subsequently poisoning the well systems for surrounding families.
4. In addition, are the storm drains identified in this proposal adequate to protect the environment from contaminants? Modern filtration systems should be in place to properly manage and maintain run off of impervious surfaces to ensure no seepage into the ground, polluting waterways and tributaries to the watershed. How do the proposed storm drains mitigate risk of polluting and contaminating the aquatic systems, vegetation, wildlife and watershed?
5. Lastly, this application does not currently appear have adequate parking spaces. There are 220 apartments proposed, which could easily amount to 440 cars. Does this proposal reflect any mitigation for contaminants, such as oil, transmission fluids, gas, grease, or exhaust products; so that they do not leak/leach from pavement to the aquifer/wetlands/watershed?

In summary, in line with regulations 10.2.d & e, I request that you, our Inland Wetlands Commission, review each of these points above carefully to ensure no irreversible or irretrievable loss of wetland or watercourse resources, as well as promote safe, healthy, and responsible development.

Respectfully,
Michael Criscuolo
2 Pocono Rd

IWC mtg.
7-27-22
A.7.

Prepared by:

Mark D'Amico
7 Tory Lane
Newtown, CT

To: Town of Newtown, Inland Wetlands Commission

As stated directly in the Inland Wetlands and Watercourse Regulations of the Town and Borough of Newtown, Connecticut, Section 1.1 (below for reference), the application IW Application #22-14 by Farrell Building Company, has to be considered for its impact on public health, the proposed and potential impacts on inland wetlands and watercourses, and conservation or improvement of such. It is evident that the application, as submitted will cause irreparable and unreasonable adverse impact to the wetlands and watercourses and upland review areas, and, in turn, public health.

"The preservation and protection of the wetlands and watercourse 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.

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 watercourse 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 and orderly process to balance the need for 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 the benefit and enjoyment and for the benefit and enjoyment of generations yet unborn."

The application requirements defined in Section 7.5 include "f) Alternatives which would cause less or no environmental impact to wetlands or watercourses and why the alternative as set forth in the application was chosen. All alternatives shall be diagramed on a site plan or drawing."

Have these alternatives, as required by regulation, been provided? If so, can the applicant show these alternatives and describe why they were not chosen in lieu of the current application, which does impact the wetlands and upland review areas, including elimination of identified wetlands and associated upland review area?

Pursuant to Section 8.9. *"In the event that the Commission determines that the application could or would have significant impact to wetland or watercourses, the applicant may be asked to fund an independent technical assessment of the activity by a consultant selected by the Commission. This assessment shall be received by the Commission prior to the completion of the public hearing section of the application review."*, given the size, scale and broad scope of the proposed activity, including significant land clearing, leveling, elimination of wetlands and associated upland review areas, as well as proximity to a significant wetland area on the property, I formally request the Commission to consider the activity proposed in the application as having a potential significant impact to wetland or watercourses. As such, by regulation and common sense, an independent technical assessment from a consultant is not only justified, but should be required.

Section 10.2 a, b, c, d, and f, which outline examples of criteria for decision, when considering the application as proposed, all support the denial of this application, due to negative impacts on the wetlands and watercourses, not only on the site/property, but more importantly the downstream impacts of the wetlands and watercourse which will be negatively impacted by the modification and/or elimination of the wetlands on the subject property.

Section 10.3 supports the above request for denial based on decision criteria, considering there are numerous feasible and prudent alternatives to the proposed regulated activity which would have significantly less or no adverse impact on the wetlands or watercourses.

Aside from the points made above, the application is clearly a severe overuse of the property, with a clear intent to use all potentially developable land on the parcel, leaving less than the absolute bare minimum requirement for buffer for wetlands and watercourses. The proposed is not working with the wetlands, and makes absolutely no attempt to improve the wetlands. Rather, the application calls for the removal of wetlands, reduction in effectiveness, function, value, and associated aquatic habitat and improperly defined upland review areas.

Although not a required consideration, but a reasonable one, is that the property is not appropriately zoned for the activity and proposed development. There is no documented need for the proposed. It is clear that the proposed activity is for the sole economic benefit of the developer and future owner of the property. The wetlands and watercourses on the property are clearly demonstrated by the application as a hindrance to desire for overdevelopment, rather than the viewed as a valuable natural resource that must be protected, preserved and improved where possible.

Finally, attached, please find a report prepared by Richard Klein of Community & Environmental Defense Services (CEDS), dated July 18 2022. CEDS was hired to provide an assessment of the application and

proposed site development. The report details the ineffectiveness of the proposed stormwater retention and filtration solution, the significant concern raised by the deforestation and replacement with paved or developed impervious surfaces, and the potential impact to sensitive and endangered species potentially present in the wetlands or immediate upland areas and/or affected areas.

In consideration of the above, as well as any public statements I have made for submission to public record, I request the Commission deny the application. Approval of the application would be irresponsible and inconsistent with the regulations as set forth and criteria for approval.

Sincerely,

Mark D'Amico

Newtown Resident and Taxpayer

LWC m + g
7-27-22
D.F.

COMMUNITY & ENVIRONMENTAL DEFENSE SERVICES

Richard D. Klein
24 Greenshire Lane
Owings Mills, Maryland 21117

410-654-3021
Help@ceds.org
ceds.org

DATE: July 18, 2022

FROM: Richard Klein, President CEDS

TO: Newtown Neighbors Alliance LLC
19 Tunnel Road
Newtown, Connecticut 06470-1242

SUBJECT: Newtown Commons Potential Stream & Wetland Impacts

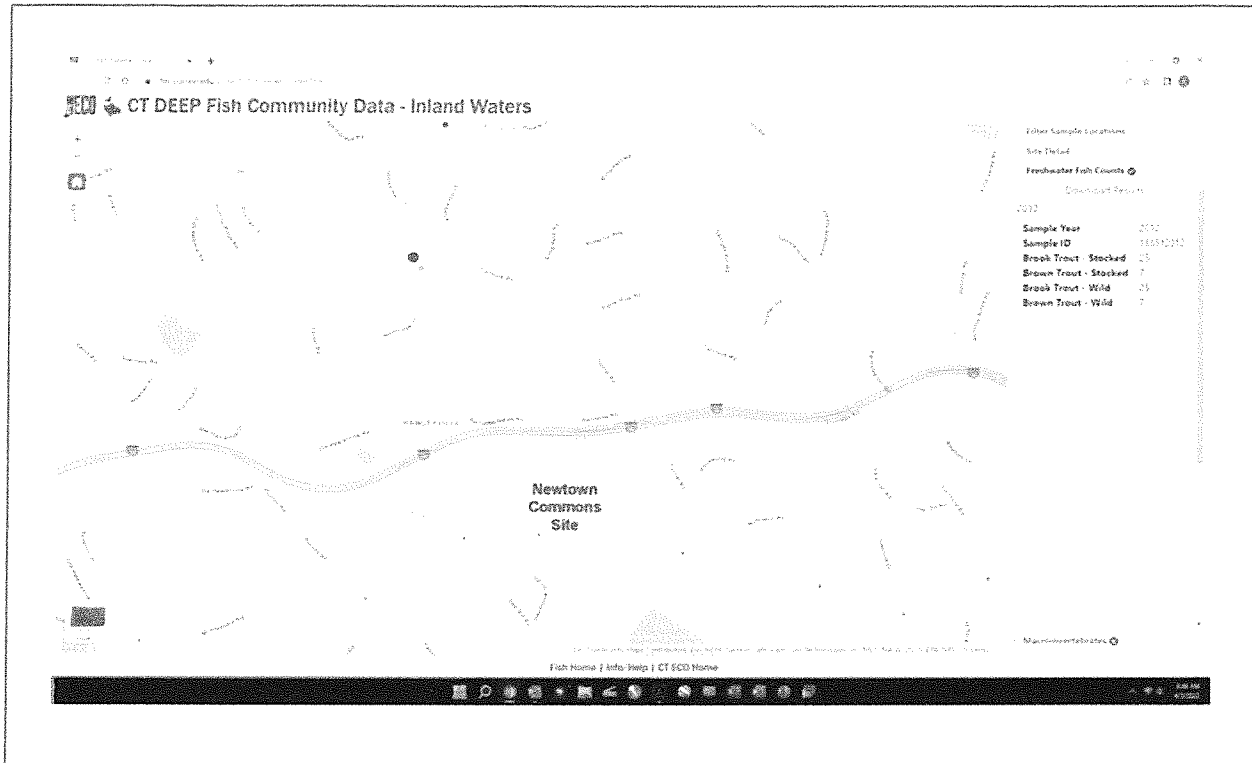
As requested, I have reviewed the two plans and the Public Notice Form forwarded to me for the Newtown Commons proposed development which would consist of 220 apartment units on the 34.25-acre parcel at 90 Mount Pleasant Road. You had asked for an assessment of possible impacts to the wetlands and stream located on the site and downstream.

The facts presented in this letter indicate that Newtown Commons, as depicted in the plans and notice, will adversely affect these waters due to:

- The 34.25-acre site is wholly within the watershed of an unnamed tributary to Pond Brook which, according to Connecticut Department of Energy & Environmental Protection (DEEP) Fish Community Data, supports wild brook trout,
- Brook trout are highly-sensitive to increases in watershed buildings, streets and other impervious surfaces as well as reductions in watershed forest cover,
- The only stormwater management measures will be detention ponds which are very ineffective in safeguarding highly-sensitive species such as Brook Trout and can exacerbate impervious surface thermal impacts,
- The project will remove a large area of forest essential to preserving a healthy Brook Trout population, and
- Four species of State Special Concern area present in wetlands downstream of the site which could be affected by poorly managed stormwater runoff and watershed forest loss due to the proposed development project.

WILD BROOK TROUT AT RISK

On the next page is a map provided by Brian Eltz, Senior Fisheries Biologist, with the Connecticut Department of Energy & Environmental Protection (DEEP) Coldwater Program. An email from Mr. Eltz conveying the map accompanies this letter. The map shows that wild Brook Trout (*Salvelinus fontinalis*) were present in an unnamed tributary to Pond Brook downstream of the Newtown Commons site at the time of the most recent sampling. I added the Newtown Commons site location to the map.



Brook trout may have been present further upstream, closer to the site, but these waters may not have been sampled. Wild Brook trout are highly sensitive to watershed land use changes and begin to decline when just 4% of a watershed is covered by buildings, streets and other impervious surfaces while other species can tolerate an imperviousness of 10%.¹

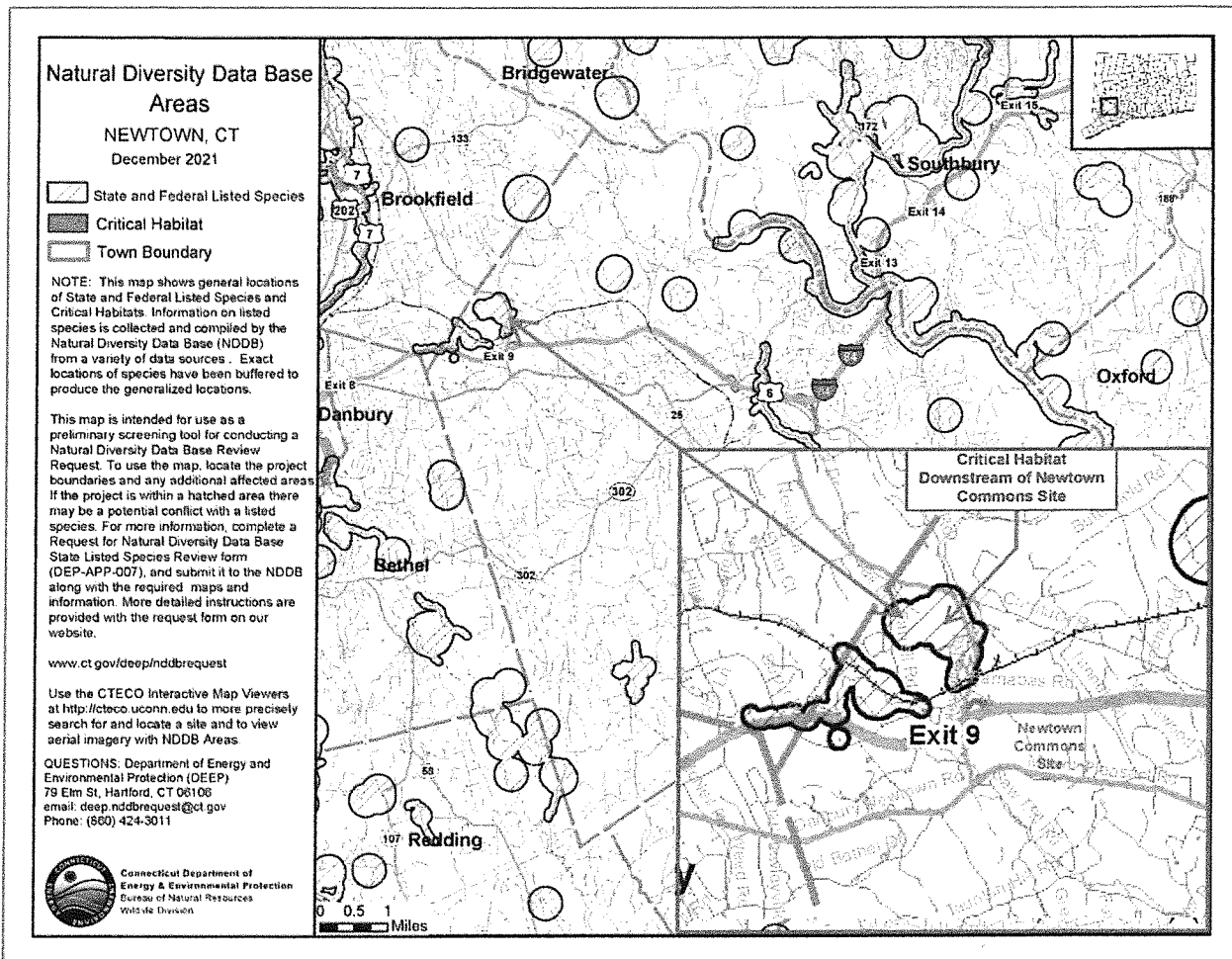
Watershed forest is equally important to preserving highly-sensitive species such as Brook Trout. One study indicated that about half a watershed should remain in forest to maintain good to excellent aquatic resource health.²

SPECIES OF STATE SPECIAL CONCERN ARE ALSO AT RISK

On the next page is the Newtown, CT Natural Diversity Data Base (NDDDB) areas map.³ This map shows locations within Newtown that may support State or Federally listed species. These species tend to be rare because they require pristine habitats and do not do well as development and other factors degrade habitat quality.

I added an inset to the map on the next page. The inset is an enlargement of the portion of the map covering the Newtown Commons site and the NDDDB downstream of the site.

¹ See *Impacts of Impervious Cover on Aquatic Systems* available online at: <https://owl.cwp.org/mdocs-posts/impacts-of-impervious-cover-on-aquatic-systems-2003/>
² This study, *IKONOS imagery for resource management: Tree cover, impervious surfaces, and riparian buffer analyses in the mid-Atlantic region* is available online at: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.95.4037&rep=rep1&type=pdf>
³ The NDDDB map was downloaded from: <https://www.depdata.ct.gov/naturalresources/endangeredspecies/nddbpdfs.asp?nddbsel=97>



I previously submitted a request to the Department of Energy & Environmental Protection (DEEP) inquiring about State or Federal Listed species associated with the NDDB area downstream of the Newtown Commons site.

In their April 7, 2022, response (*accompanying this letter*), DEEP noted that the following plant species of State Special Concern were present in the NDDB area downstream of the Newtown Commons site:

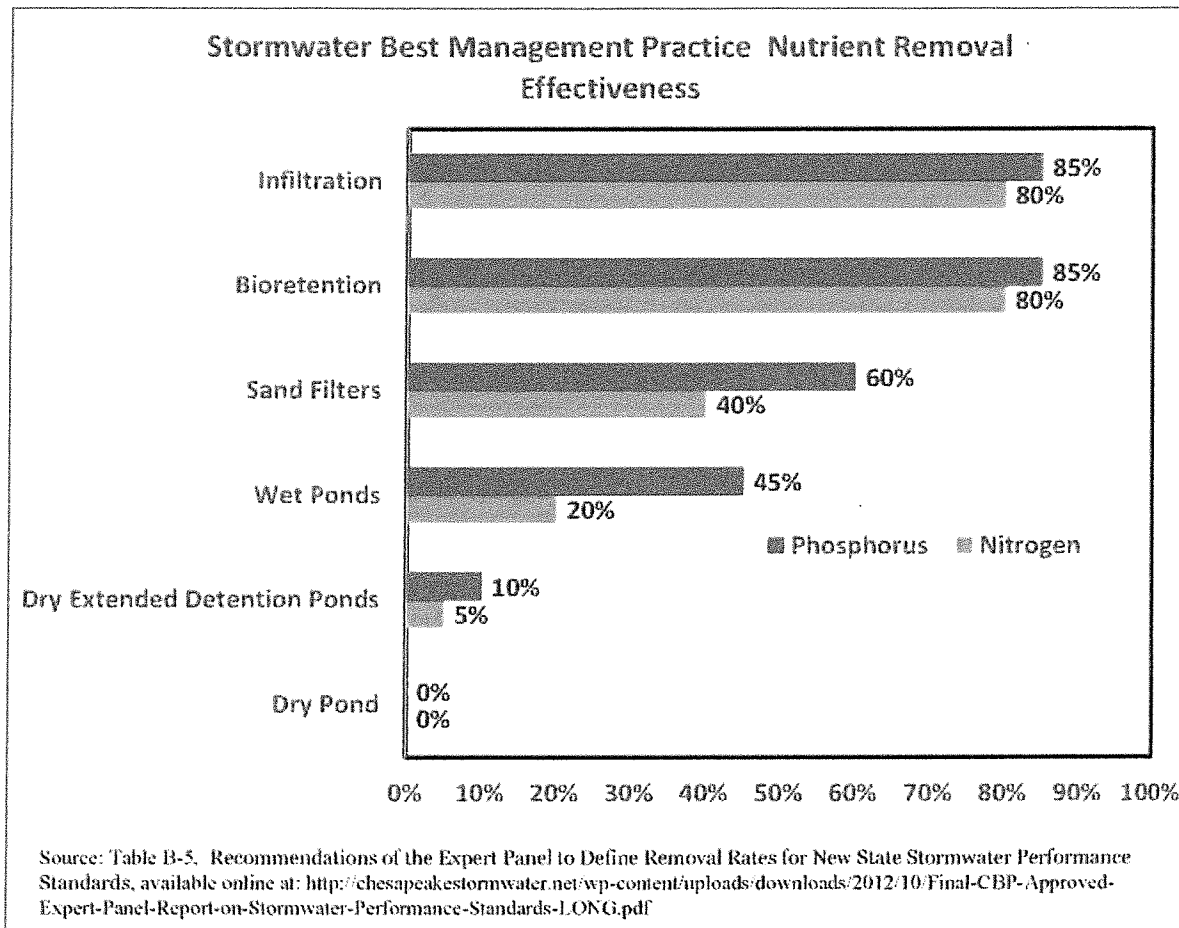
- *Asclepias purpurascens*, Purple milkweed
- *Cardamine douglassii*, Purple cress
- *Carex trichocarpa*, Hairy-fruited sedge
- *Platanthera flava var. herbiola*, Pale green orchid

These species of State Special Concern may also be impacted by increased watershed impervious area, poorly managed stormwater and a decline in watershed forest cover.

INEFFECTIVE STORMWATER DETENTION PROPOSED

The plans and the Public Notice Form indicates stormwater runoff from the proposed apartment buildings, streets and parking areas will be managed with two detention ponds also labeled generically as *stormwater management basins*.

The graph below compares the pollution-removal effectiveness of six categories of stormwater management practices.



I assume that the proposed “stormwater management basins/detention ponds” will have attributes similar to both the Dry Extended Detention and Wet Pond categories. If this is correct then these facilities will trap 5% to 45% of the nutrients washed from impervious surfaces and lawns. This is far below the 80% to 85% removal rate attainable with the most effective practices - infiltration and bioretention. These highly-effective practices are essential to gaining the benefits of watershed development without impacting uniquely sensitive species such as Brook Trout and the four species of State Special Concern in waters downstream of the site.

Infiltration-bioretention practices provide another benefit of equal importance to Brook Trout – groundwater recharge. Stormwater management basins/detention ponds do not recharge groundwater.

Replacing forest with buildings, streets and other impervious surfaces can increase the frequency and severity of flooding by up to a hundred-fold.⁴ The increase in floodwater flows can scour stream channels to a width two- to eight-times greater than that prior to development. While

⁴ See Urban Hydrology for Small Watersheds at: https://www.nrcs.usda.gov/Internet/FSI_DOCUMENTS/stelprdb1044171.pdf

the proposed ponds-basins may resolve the scouring impact, they cannot maintain the groundwater recharge benefit of the existing forest.

Much of the increased runoff due to impervious surfaces, is rainwater that soaked into the soil prior to development. Covering soils with buildings, roads and other impervious surfaces prevents groundwater recharge. Recharge accounts for the high-quality water that enters streams and wetlands from springs and seeps long after a storm has passed. In fact, during droughts all of the high-quality water carried by a stream derives from groundwater recharge. While the infiltrated rainfall travels through the earth it cools considerably, which is essential to species like Brook Trout that require stream temperatures in the 60-degree Fahrenheit range.

An obvious question would be: *Why not simply add infiltration-bioretenion practices to the Newtown Commons plans?*

Unfortunately, as explained below, soils on the site are poorly suited for these highly-effective practices.

NEWTOWN COMMONS SOILS MARGINAL FOR INFILTRATION

Hydrologic Soil Groups (HSG) is a system for rating soils according to infiltration and runoff characteristics. The ratings range from “A” to “D”. The sandy-gravelly HSG “A” soils produce the least runoff and allow the greatest degree of infiltration and groundwater recharge. Runoff is highest from the clayey or wet HSG “D” soils with the lowest infiltration and recharge.

Chapter II-P3⁵, of the *2004 Connecticut Stormwater Quality Manual*, recommends soils belonging to Hydrologic Soil Group “A” for infiltration practices. The Hydrologic Soil Groups of the site area are shown in the first attachment to this letter. All of the soils on the 34.25-acre site are Hydrologic Soil Groups “C” and “D”, which are unsuitable for the infiltration-bioretenion facilities achieving a high pollution removal rate and maintaining groundwater recharge. About 10% of Newtown soils are “A” and another 40% *may* be suitable for infiltration practices.⁶

PONDS EXACERBATE THERMAL IMPACT TO BROOK TROUT

Impervious surfaces can heat to very high temperatures during the summer. This heat is then transferred to rainwater and runoff from asphalt and other heated impervious surfaces.⁷ Similarly, runoff sitting in a stormwater pond can heat into the upper 80-degree Fahrenheit range during the summer. When a storm occurs, this heated runoff is displaced from a pond into nearby waterways, causing stream temperatures to increase considerably in a very short period of time.

It is because of this thermal impact that the Connecticut Department of Energy & Environmental Protection (DEEP) *2004 Connecticut Stormwater Quality Manual* cautions against

⁵ This chapter is available online at: https://portal.ct.gov/-/media/DEEP/water_regulating_and_discharges/stormwater/manual/CH11IPP3pdf.pdf

⁶ The percent of Newtown soils in Hydrologic Soil Groups “A” and “B” is derived from the USDA Web Soil Survey at: <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>

⁷ See Section 3.5, in *Impacts of Impervious Cover on Aquatic Systems* available online at: <https://owl.cwp.org/mdocs-posts/impacts-of-impervious-cover-on-aquatic-systems-2003/>

locating stormwater ponds in watersheds supporting cold water species such as Brook Trout.⁸ Brook trout do best when stream temperature is in the 60-degree Fahrenheit range and begin to die in the mid-70°s.⁹

The text in the *2004 Connecticut Stormwater Quality Manual* does not explicitly prohibit ponds in watersheds supporting cold water species. Instead, designers are cautioned to use measures to reduce thermal impacts, such planting trees to shade and presumably lower pond temperature.

It appears though that shading and other measures recommended in the *2004 Connecticut Stormwater Quality Manual* are based on a 1990 study, *Thermal Impacts Associated with Urbanization and Stormwater Best Management Practices*.¹⁰

Unfortunately, more recent studies, such as *A Temperature Study of Three Extended Detention/Wetland Stormwater Management Basins in Maryland and their Effect on Cold Water Trout Streams*¹¹, have documented that pond shading and other measures are not very effective in protecting sensitive species from stormwater pond thermal impacts, especially those that are highly-sensitive like Brook Trout. This is why a number of states recommend the use of infiltration practices in watersheds supporting coldwater species.

NEWTOWN COMMONS COMBINED IMPERVIOUS AREA-FOREST LOSS IMPACTS

The combined effect of impervious surface increases, ineffective and even harmful stormwater measures, and watershed forest loss will likely cause substantial degradation of Brook Trout populations and possibly the four species of State Special Concern.

Impervious Area

I have been credited with publishing one of the first studies of the relationship between watershed development (*impervious area*) and aquatic resource health, *Urbanization & Stream Quality Impairment*.¹² Over the past four decades a large number of other researchers have confirmed that watershed land use changes degrade aquatic ecosystem health. As noted above, this research shows that the threshold at which watershed impervious area will degrade aquatic resources ranges from 4% to 12%.

Accompanying this letter is a report from the USGS *StreamStats* website.¹³ The report provides the existing watershed drainage area and percent of watershed impervious area at the point where the unnamed stream enters the NDDB area near the Hawleyville Road crossing. It is in this area where the wild Brook Trout population was found.

The USGS *StreamStats* report shows the existing imperviousness of the unnamed tributary at Hawleyville Road is 9.5%.

⁸ This manual is available online at: <https://portal.ct.gov/DEEP/Water-Regulating-and-Discharges/Stormwater/Stormwater-Manual#download>

⁹ See: <https://journals.biologists.com/jeb/article-pdf/220/21/3976/1900295/jeb161224.pdf>

¹⁰ This study is available online at: <https://www.mwcog.org/documents/1990/12/12/thermal-impacts-associated-with-urbanization-and-stormwater-management-best-management-practices/>

¹¹ This study is available online at: <https://app.box.com/s/2zdwrw9awi4cpkensfn9lww1gw31j33v>

¹² *Urbanization & Stream Quality Impairment* is available online at: <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1752-1688.1979.tb01074.x>

¹³ *StreamStats* is online at: <https://streamstats.usgs.gov/ss/>

The Newtown Commons plans indicate that the 34.25-acre site will be about one-fourth buildings, streets, parking areas and other impervious surfaces. If correct, then the project will add 8.6 acres of impervious surfaces to the watershed. This addition will raise the imperviousness of the 115-acre watershed to 17%, far in excess of the 12% threshold cited in *Connecticut Watershed Response Plan for Impervious Cover*¹⁴ as the point where stream quality degradation becomes substantial.

The two proposed stormwater ponds will not resolve the impact of this dramatic increase in impervious area. In fact, both ponds could exacerbate the impact by subjecting Brook Trout populations to excessive water temperatures.

Forest Loss

On the next page is a 2018 aerial of the unnamed tributary watershed. The Newtown Commons site is outlined with yellow and the land area (watershed) draining to the Unnamed Pond Brook tributary at Hawleyville Road is delineated with blue.

This aerial shows that about 80% of the 115-acre watershed (within the blue line) is forest. Watershed forest is essential to preserving highly-sensitive species such as Brook Trout and perhaps the four species of State Special Concern. One study indicated that about half a watershed should remain in forest to maintain the good to excellent conditions required by highly-sensitive species such as Brook Trout.¹⁵ At 80% existing forest, the watershed is well above this threshold, which may account for why Brook Trout continue to thrive even though watershed impervious area is high.

The 2018 aerial shows that the Newtown Commons site (bounded by the yellow line) is mostly forest today. Project plans indicate about two-thirds of this forest will be cleared. If this is correct then 22 acres of forest will be removed, lowering forest cover in the 115-acre watershed to 60%, which is much closer to the 50% threshold for maintaining good to excellent quality waters.

This tremendous increase in watershed impervious area combined with the loss of considerable forest could pose a very substantial threat to the wild Brook Trout population and the four species of State Special Concern present in the waters downstream of the proposed Newtown Commons site. Therefore, I recommend that you call upon the Newtown Inland Wetlands Commission to deny approval for Newtown Commons.

Watershed Management Plan Needed

According to the DEEP Fish Community Database - Inland Waters¹⁶, the unnamed tributary is one of only nine streams within Newtown that supports wild Brook Trout. The CT Natural Diversity Data Base (NDDDB) map indicates that the Newtown Commons site drains to one of only 20 areas within Newtown supporting State or Federally listed species.¹⁷ Combined, these two factors make the unnamed tributary uniquely important and sensitive.

¹⁴ Ibid.

¹⁵ This study, *IKONOS imagery for resource management: Tree cover, impervious surfaces, and riparian buffer analyses in the mid-Atlantic region* is available online at: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.95.4037&rep=rep1&ctype=pdf>

¹⁶ The database is available online at: <https://cteco.uconn.edu/projects/fish/viewer/index.html>

¹⁷ The NDDDB map was downloaded from:

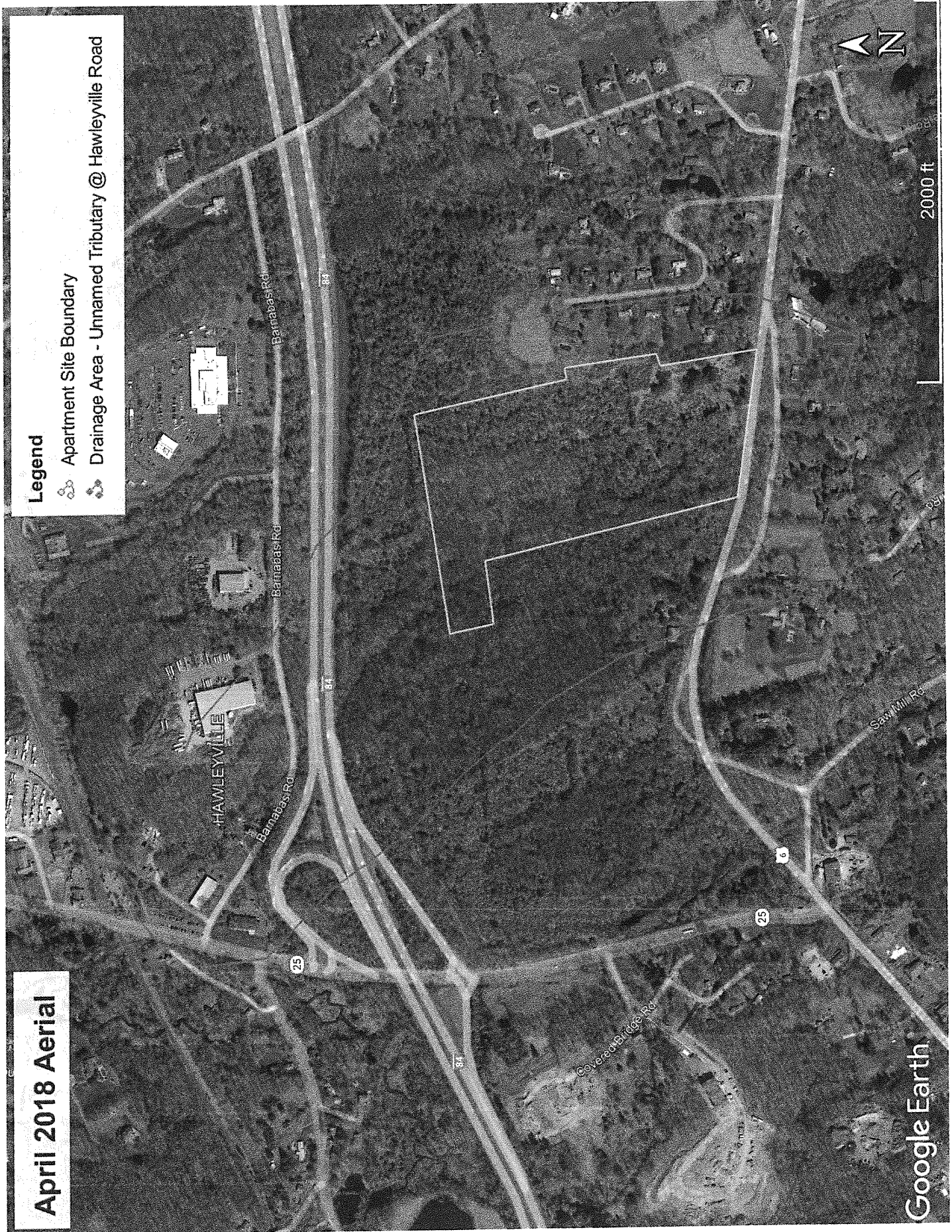
<https://www.depdata.ct.gov/naturalresources/endangeredspecies/nddbpdfs.asp?nddbsel=97>

April 2018 Aerial

Legend

Apartment Site Boundary

Drainage Area - Unnamed Tributary @ Hawleyville Road



Google Earth

The 115-acre watershed is also unique for another reason. The parcel adjoining the Newtown Commons site to the west was recently proposed to be a warehouse facility. While Newtown denied approval for the warehouse this site may become the subject of another development proposal in the future.

I suggest calling upon the Inland Wetlands Commission to urge Newtown Board of Selectmen to develop a plan for managing growth in the tributary watershed that will preserve the unique environmental attributes while possibly allowing some reasonable amount of development, perhaps several single-family detached homes that would not cover more than 4% of the site with impervious surfaces.

I have attached my resume. I can be reached at Rklein@ceds.org or 410-654-3021 for further detail.

From: [Eltz, Brian](#)
To: [RICHARD KLEIN](#)
Subject: RE: Pond Brook Tributary Fisheries
Date: Tuesday, April 5, 2022 11:24:36 AM
Attachments: [image002.png](#)
[image003.png](#)
[Pond Brook trib.PNG](#)

Hi Richard,

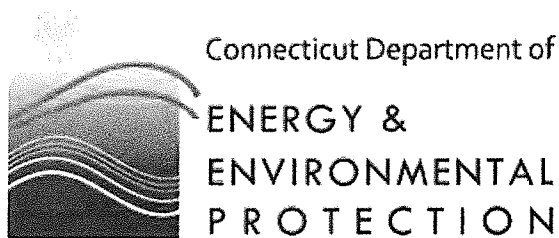
Please see attached map of samples in that area. The blue dot represents a wild brook trout stream that crosses Rt. 25 (Hawleyville Rd.).

Data can be downloaded from this site.

[CT DEEP Fisheries Data \(uconn.edu\)](#)

Brian

Brian Eltz
Senior Fisheries Biologist
Coldwater Program
CT DEEP Fisheries Division
Eastern District Headquarters
209 Hebron Road
Marlborough, CT 06447
(860) 424-3406



www.ct.gov/deep

***Conserving, improving and protecting our natural resources and environment;
Ensuring a clean, affordable, reliable, and sustainable energy supply.***

From: RICHARD KLEIN <rklein@ceds.org>
Sent: Monday, April 4, 2022 10:44 AM
To: Eltz, Brian <Brian.Eltz@ct.gov>
Cc: eltz@ct.gov
Subject: Re: Pond Brook Tributary Fisheries

April 7, 2022

Richard Klein
Community & Environmental Defense Services
24 Greenshire Lane
Owings Mills MD 21117
rklein@ceds.org

Project: Preliminary Assessment of Wetland and unnamed tributary to Pond Brook and 10 Hawleyville Road in Newtown, CT
NDDDB Preliminary Assessment No.: 202203837

Dear Richard Klein,

I have reviewed Natural Diversity Database maps and files regarding the area provided for a preliminary assessment of wetlands along unnamed tributary to Pond Brook and 10 Hawleyville Road in Newtown, Connecticut.

According to our records there are reported populations of State Listed plant species that occur in the vicinity of this property. I have attached a list of species known from this area. We have not visited this site. Depending on the habitat available, these or other species may be present. Please be advised that this is a preliminary review and not a final determination. A more detailed review will be necessary to move forward with any environmental permit applications submitted to DEEP for the proposed project. **This preliminary assessment letter cannot be used or submitted with permit applications at DEEP.** This letter is valid for one year.

To better evaluate the property and to plan for activities that may enhance habitat or to prevent impacts to State-listed species, field surveys of the site should be performed by a qualified biologist(s) with the appropriate scientific collecting permits at a time when these target species are identifiable. A report summarizing the results of such surveys should include:

1. Survey date(s) and duration
2. Site descriptions and photographs
3. List of component vascular plant and animal species within the survey area (including scientific binomials)
4. Data regarding population numbers and/or area occupied by State-listed species
5. Detailed maps of the area surveyed including the survey route and locations of State listed species
6. Conservation strategies or protection plans that indicate how impacts may be avoided for all state listed species present on the site
7. Statement/résumé indicating the biologist's qualifications. Please be sure when you hire a consulting qualified biologist to help conduct this site survey that they have the proper experience with target taxon and have a CT scientific collectors permit to work with state listed species for this specific project.


The site surveys report should be sent to our CT DEEP-NDDDB Program (deep.nddbrequest@ct.gov) for further review by our program biologists along with an updated request for another NDDDB review. Incomplete reports may not be accepted.

If you do not intend to do site surveys to determine the presence or absence of state-listed species, then you should presume species are present and let us know how you will protect the state-listed species from being impacted by this project. You may submit these best management practices or protection plans with your new request for an NDDDB review. After reviewing your new NDDDB request form and the documents describing how you will protect this species from project impacts we will make a final determination and provide you with a letter from our program to use with DEEP-Permits.

Natural Diversity Database information includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Natural History Survey, cooperating units of DEEP, landowners, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the NDDDB should not be substitutes for onsite surveys necessary for a thorough environmental impact assessment. The result of this review does not preclude the possibility that listed species may be encountered on site and that additional action may be necessary to remain in compliance with certain state permits.

Please contact me if you have further questions at (860) 424-3378, or karen.zyko@ct.gov . Thank you for consulting the Natural Diversity Data Base.

Sincerely,



Karen Zyko
Environmental Analyst

Species List for NDDDB Request

Scientific Name	Common Name	State Status
Vascular Plant		
<i>Asclepias purpurascens</i>	Purple milkweed	SC
Habitat: Dry soil (G & C 1991). Roadsides, fields, borders of woods, on moist or dry soil (CT herbarium labels). Blooms Jun, Jul.		
<i>Cardamine douglassii</i>	Purple cress	SC
Habitat: wet shaded woods & swamps, frequently calcareous (D&C). Blooming time: late March, Apr, early May		
<i>Carex trichocarpa</i>	Hairy-fruited sedge	SC
Habitat: Marshes and wet meadows (G & C, 1991); confined to western half of CT and mostly, but not exclusively calcareous. Mature fruits: Jun, Jul.		
<i>Platanthera flava var. herbiola</i>	Pale green orchid	SC
Habitat: Swamps, low woods, wet meadows, seeps. Can be very abundant in open habitat where excavation of the topsoil has left behind exposed compact till. Blooming time: Jun-Jul.		

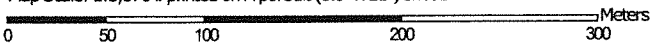
E = State Endangered, T = State Threatened, SC = State Special Concern
 FE = Federally Endangered, FT = Federally Threatened

Hydrologic Soil Group—State of Connecticut
(Newtown Commons Apartments)



Soil Map may not be valid at this scale.
















































Map Scale: 1:3,870 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84



MAP LEGEND

 Area of Interest (AOI)	 C
 Area of Interest (AOI)	 C/D
 Area of Interest (AOI)	 D
 Area of Interest (AOI)	 Not rated or not available
Soils	Water Features
 A	 Streams and Canals
 A/D	Transportation
 B	 Rails
 B/D	 Interstate Highways
 C	 US Routes
 C/D	 Major Roads
 D	 Local Roads
 Not rated or not available	Background
 A	 Aerial Photography
 A/D	
 B	
 B/D	
 C	
 C/D	
 D	
 Not rated or not available	
 A	
 A/D	
 B	
 B/D	
 C	
 C/D	
 D	
 Not rated or not available	
 A	
 A/D	
 B	
 B/D	
 C	
 C/D	
 D	
 Not rated or not available	

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: State of Connecticut
Survey Area Data: Version 21, Sep 7, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 8, 2020—Oct 14, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
45B	Woodbridge fine sandy loam, 3 to 8 percent slopes	C/D	3.7	9.5%
47C	Woodbridge fine sandy loam, 3 to 15 percent slopes, extremely stony	C/D	22.5	57.8%
75E	Hollis-Chatfield-Rock outcrop complex, 15 to 45 percent slopes	D	0.2	0.6%
84B	Paxton and Montauk fine sandy loams, 3 to 8 percent slopes	C	0.6	1.6%
84C	Paxton and Montauk fine sandy loams, 8 to 15 percent slopes	C	3.2	8.3%
84D	Paxton and Montauk fine sandy loams, 15 to 25 percent slopes	C	1.4	3.6%
85B	Paxton and Montauk fine sandy loams, 3 to 8 percent slopes, very stony	C	2.3	5.8%
86C	Paxton and Montauk fine sandy loams, 3 to 15 percent slopes, extremely stony	C	5.0	12.8%
Totals for Area of Interest			38.9	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

COMMUNITY & ENVIRONMENTAL DEFENSE SERVICES

Richard D. Klein, President
24 Greenshire Lane
Owings Mills, Maryland 21117

(410) 654-3021
E-Mail Rklein@ceds.org
Web Page: ceds.org

QUALIFICATIONS LAND USE IMPACTS UPON AQUATIC SYSTEMS

RICHARD D. KLEIN

EMPLOYMENT HISTORY

COMMUNITY & ENVIRONMENTAL DEFENSE SERVICES

1987-Present President

MARYLAND DEPARTMENT OF NATURAL RESOURCES

1977-1987 Save Our Streams Program Conservation Associate
Natural Resources Manager

1973-1977 Water Quality Services Division Conservation Associate

1969-1973 Anadromous Fish & Stream Survey Project Conservation Aide
Conservation Associate

EXPERT TESTIMONY ON THE EFFECTS OF LAND DEVELOPMENT UPON AQUATIC SYSTEMS

Though I am not certified as a biologist, chemist, engineer, or any other specific professional classification, my 49 years of experience in evaluating the effects of land development upon aquatic systems has allowed me to qualify as an expert in circuit court, the Maryland Court of Special Appeals, and the following administrative bodies:

Decision-Making Body

Case

Anne Arundel Co., MD

Board of Appeals

Back Bay Beach Project
Chesapeake Terrace Rubble Landfill
Woods Landing II

Baltimore Co., MD

Board of Appeals

Eck Property
Georges Transfer
Greystone Golf Course
Villa Julie College

*We've saved more than 15,000 acres of farm and forestland,
hundreds of neighborhoods and waterways, and one of America's oldest historic sites."*

Baltimore Co, MD *continued*

Zoning Commissioner/Hearing Officer

Bridle Ridge
 Burns Property
 Glyndon Meadows
 Glyn Garth
 Greystone Golf Course
 Honeygo Rubble Landfill
 Locksley Conserve
 Magers Landing

Cecil Co., MD

Board of Appeals

Old Line Village

Charles Co., MD

Board of Appeals

Board of County Commissioners

St. Peters Church mining site
 Chapmans Landing

District of Columbia

Zoning Commission

Arkenderry Mews

Dorchester Co., MD

Board of Appeals

Hunting Creek rubble landfill

Easton, CT

Planning & Zoning Commission

Conservation Commission

Running Brook Farm

Running Brook Farm

Howard Co., MD

Board of Appeals

Greenwood Place

Prince Property

Donaldson Funeral Home

Covenant Baptist Church

Planning Board

Kent Co., MD

Board of Appeals

Planning Board

Eastern Shore Bible Church

Eastern Shore Bible Church

Bramble Contractor Yard

King George Co., VA

Board of Supervisors

Circuit Court

Department of Environmental Quality

Hopyard Farm

Guest et al v. Board of Supervisors

King George landfill

King County, WA

Hearing Examiner

Beaver Lake Estates II

Bordeaux at Beaver Crest

Greens At Beaver Crest

Norris Estates

Louisa Co., VA

Board of Supervisors

Martha's Vineyard Commission, MA

Maryland Office of Administrative Hearings

Edgemar Rezoning Request

Meeting House Golf Club

Villa Julie College

Maryland Wetlands Administration	Baldwins Choice Riddle Farm
Montgomery Co., MD Planning Board	Marriott/Milestone Project Residences at Great Falls VanGrack/McNeil Project Miller Property
Zoning Hearing Examiner	Point Airy Place
Pilesgrove Township, NJ Planning Board	The Woodlands Project Schelford North Farm Cross Road Trail rubble landfill Villages of Belmont
Prince George's Co., MD Planning Board	Waverley
Zoning Hearing Examiner	Days Cove Rubble Landfill Rubble landfill zoning text amendments Rubble landfill zoning text amendments
Prince William Co., VA Planning Board	Cedar Cove Marina Boatel Persimmon Rubble Landfill Renie Quade Property Woods at Myrtle Point County solid waste plan First Colony First Colony Willowbrook Woods at Myrtle Point
Queen Anne' County, MD Board of Appeals Board of County Commissioners Planning Board	Quarry Valley Country Club
Saint Mary's Co., MD Board of Appeals	Captains Pointe Captains Pointe Lighthouse Sound
Board of County Commissioners	
Planning Commission	
Tinicum Township, PA Board of Supervisors	
Worcester Co., MD Board of Appeals Board of County Commissioners	

EDUCATION

In 1973, I began pursuing a degree in environmental science so I could engage in professional level work within the Department of Natural Resources (DNR). After completing my first year of college it became apparent that DNR would permit me to perform professional level work regardless of academic credentials. At that point I elected to expand my knowledge of

environmental science through independent study and the training provided through the Department. I did not complete a degree program.

EXPERTISE GAINED THROUGH EXPERIENCE & OBSERVATION

TRAINING

While working under the supervision of DNR chemists, biologists, engineers, and other professionals, I acquired expertise in a wide range of methods for assessing the physical, chemical, and biological characteristics of aquatic systems. These systems included freshwater streams and rivers, ponds, lakes, reservoirs, wetlands, tidal waters, and groundwater. Following is a summary of the specific assessment methods I learned how to employ:

- Collection of water samples for chemical and bacteriological analysis; operation of various water quality meters including those designed to measure dissolved oxygen, stream flow, tidal currents, specific conductance, turbidity, pH, chlorine, chloride, fluorescence, and water/air temperature. I also learned how to operate weather monitoring equipment, well sampling equipment, data loggers and recorders, and robot water quality monitors. I spent several months analyzing water samples for chemical and bacteriological parameters in the DNR laboratory.
- I was instructed in procedures for surveying streams, rivers, tidal waters, and lakes for factors which may effect fishery resources. These factors included pollution, discharges, stormwater runoff, erosion and sedimentation problems, fish migration barriers, sources of thermal pollution, stream shade and buffer deficiencies, livestock grazing effects and other agricultural impacts, construction site impacts, physical destruction of aquatic habitat, and a number of other factors. I employed these procedures in surveying nearly a thousand miles of Maryland streams, rivers, tidal waters and impoundments.
- I was also instructed in procedures for collecting and identifying fish, aquatic insects, crustaceans, aquatic plants (including algae), shellfish, and other aquatic organisms. I was taught how to assess the condition of individual organisms and to use aquatic communities to assess the health and condition of streams, lakes, tidal waters, and other aquatic systems.
- I learned how to study groundwater systems through monitoring wells and other methods. My responsibilities included sampling monitoring wells at landfills, sewage sludge disposal sites, wastewater treatment facilities, and other locations.
- I was also instructed on proper procedures for designing and conducting various studies of aquatic systems. This included sampling station selection, quality control/quality assurance, data analysis, and interpretation of data results based upon Maryland water quality standards and various other criteria. I was also instructed on the preparation of reports on the findings of studies of aquatic systems.

PROFESSIONAL RESEARCH & ACTIVITIES-DNR

While I was with the Water Quality Services Division I studied the quality of stormwater runoff from developed lands. This experience included sample collection, laboratory analysis, study design, and interpretation of the results. In 1978, I conducted my first independent professional study, which focused on the relationships between land development and the health of aquatic systems. The paper addressed the effect of land development upon groundwater recharge and base flow, water temperature, pollutant loadings, channel erosion, and the overall relationship between percent impervious area and the health of fish and macroinvertebrate communities. The results of my study were published in the scientific journal *Water Resources Bulletin* (15(4):936-952) under the title of *Urbanization and Stream Quality Impairment*. This paper serves as the primary basis for percent impervious area limits found in the Maryland Chesapeake Bay Critical Areas law and many local land use laws. My paper also served as one of the primary justifications for the two-acre lot exemption contained in the Maryland Stormwater Management regulations.

I developed a method for quickly assessing the health of freshwater streams and rivers using aquatic insects, crustaceans, and other macroinvertebrates.

I managed 15 major DNR investigations of the effects of developed lands upon the quality of aquatic systems. These investigations utilized the macroinvertebrate assessment technique I developed.

I designed and managed a study of the effects of Savage River Reservoir upon the Savage River, in Garrett County, Maryland. The study was designed to assess the effects of the reservoir upon channel morphology (stream bed particle size distribution, channel width and depth), base flow, water depth and velocity distributions, and various facets of stream ecology, including effects upon aquatic insects, crustaceans, and fishery resources. I interpreted the data generated through the study and prepared the report of findings.

I conducted a study of the effects of Prettyboy and Loch Raven Reservoirs upon the temperature, chemistry, aquatic insects, and fishery resources of Big Gunpowder Falls.

I conducted studies of the temperature regime of streams and the effects of the following factors upon stream temperature: stormwater runoff from developed lands, absence of shading vegetation, effects of varying amounts of shade upon stream temperature, discharges of heated water from industrial activities, and impoundment effects.

I conducted a study of fish migration barriers formed by highway crossings in Maryland.

I managed a study of the effects of existing stormwater management ponds and lakes upon stream channel erosion. The study was carried out by DNR staff under my supervision.

I developed a program for training citizens to evaluate the quality of erosion and sediment control measures on construction sites. I supervised a number of large citizen inventories of erosion and sediment control quality at the county and watershed level.

I developed and managed the Gwynns Falls Restoration Campaign. This was the first attempt to restore a degraded suburban-urban stream in Maryland. It was a joint project of Baltimore County, the City of Baltimore, and the Maryland Department of Natural Resources. My duties included developing a watershed restoration plan, overseeing a \$100,000 study to establish "before" conditions in the stream system, and managing the staff assigned to the project. I chaired the joint city, county, and DNR committee overseeing the campaign.

I was the author of the DNR handbooks entitled *The Preservation & Enhancement of Stream Quality* and *The Restoration of Urban Streams*. I also wrote DNR publications on the use of the Universal Soil Loss Equation and Manning's equation for calculating land development effects upon flood water volumes.

I designed and supervised the installation of eight stormwater infiltration structures. These were the first stormwater infiltration structures installed in an existing developed area in Maryland.

I compiled a review for DNR of the scientific literature of the effects of sediment pollution from agriculture, logging, mining, and construction activity upon aquatic systems.

I compiled another review of scientific literature for DNR entitled *Effects of Urbanization Upon Aquatic Resources*.

I was assigned the responsibility by DNR's Tidewater Administration to develop habitat protection criteria for all of Maryland's fish and shellfish resources. This responsibility included review of the scientific literature as well as coordinating research conducted by most of the agency's other professional staff. The criteria covered physical habitat requirements along with temperature preferences and the lethal-sublethal effects of temperature, toxic substances, and all other environmental contaminants.

PROFESSIONAL RESEARCH & ACTIVITIES: CEDS

Since starting Community & Environmental Defense Services (CEDS) in 1987, I have evaluated the environmental effects of thousands of land development projects. Though most of these evaluations were performed at the request of citizen organizations, my clients have included development companies as well as local and state government.

I prepared watershed management plans for the following Maryland waterways: Cuckold Creek, Middle River, Town Creek, and the Saint Mary's River. Much of the plans are devoted to the effects of current and future watershed development.

In 1990, I conducted a survey of 90 construction sites in the Chesapeake Bay watershed on behalf of the Chesapeake Bay Foundation. The purpose of the survey was to assess erosion and sediment control quality along with stormwater management measures. The results of the survey were presented in a book entitled *Turning The Tide* (Island Press).

Methods for assessing and minimizing the effects of land development upon aquatic systems were included in my book, *Everybody Wins: A Citizen's Guide to Development*, which is published by the American Planning Association.

I prepared a guidance publication entitled *Protecting The Aquatic Environment From The Effects of Golf Courses*. The publication begins with a review of a study I conducted of 11 golf courses in Maryland and Pennsylvania. Next, the scientific literature regarding the environmental effects of golf courses is reviewed. I then presented a number of recommendations for siting, designing, and managing golf courses to enhance the aquatic environment. The findings presented in my publication were cited in a literature review commissioned by the U.S. Golf Association, *Environmental Issues Related to Golf Course Construction and Management*. I wrote a chapter in the second edition of *Handbook of Integrated Pest Management for Turf and Ornamentals*, which is published by the U.S. Environmental Protection Agency. The chapter is entitled Siting and Design Considerations to Enhance the Environmental Benefits of Golf Courses. The chapter is based upon my publication *Protecting the Aquatic Environment From The Effects of Golf Courses*. I presented my findings at a 1991 conference sponsored by the U.S. Golf Association and the Golf Course Superintendents Association of America. I also presented a paper at the 1991 New York State Turfgrass Conference and the 1991 conference on golf courses held in Honolulu, Hawaii. A paper I wrote appeared in the March/April 1991 issue of the Green Section Record, which is published by the U.S. Golf Association. In 1991, I was retained by the Office of State Planning, State of Hawaii, to evaluate the potential environmental effects of three golf courses proposed for construction on the island of Oahu. I have conducted assessments of more than one hundred golf courses located throughout the United States.

I conducted a review of the scientific literature regarding the effects of boating activity and boating facilities upon the aquatic environment. The results of this review were presented in my publication *The Effects of Boating Activity & Related Facilities Upon Tidal Creeks*. Recommendations contained in this publication were incorporated into a U.S. EPA guidance document entitled *Guidance specifying management measures for sources of nonpoint pollution in coastal waters*. The State of Maryland also adopted my recommendations as part of the marina regulations administered by the Tidal Wetlands Division of the Department of the Environment.

I wrote a 300-page book entitled *How To Win Land Development Issues*. This book guides citizens through a process for finding Equitable Solutions to development related concerns.

In 2010, I conducted a series of workshops throughout Maryland on the new Environmental Site Design requirements. More than 200 engineers, government officials, nonprofit staff and volunteers attended the workshops.

PROFESSIONAL COMMITTEES

I served as the County Executive's representative on the Baltimore County Soil Conservation District.

I served as a representative of the Department of Natural Resources on:

- the 208 Technical Advisory Committee which oversaw the Nationwide Urban Runoff Project administered by the former Baltimore Regional Planning Council.
- the subcommittee of the General Assembly that drafted the Maryland Stormwater Management Act.
- the Instream Flow Committee of the Interstate Commission on the Potomac River Basin.
- I served on the Acid-Rain Task Force convened by Trout Unlimited.

I served on the Golf and Environment Roundtable convened by the National Golf Foundation, the U.S. Golf Association other national golfing organizations, and a number of national environmental organizations.

I served on two committees formed by the Maryland Department of the Environment-the Solid Waste Accord and the Rubble Landfill Workgroup .

HONORS & AWARDS

Environmental Excellence Award - Maryland Department of the Environment.

Maryland Governor Schaefer's Salute To Excellence.

Outstanding Conservationist; Maryland State Game & Fish Protective Association.

Conservation Award; Izaak Walton League of America.

Certificate of Commendation; Tawes Award for a Clean Environment.

The Joe Brooks Conservation Award; Maryland Chapter - Trout Unlimited.

Outstanding Water Conservationist; Maryland Wildlife Federation.

Gurney Godfrey Award; Maryland Fly Anglers.

Certificate of Appreciation; Maryland Classified Employees Association.

Outstanding Individual; American Planning Association - Maryland Chapter.

PUBLICATIONS

Urbanization and stream quality impairment. *Water Resources Bulletin* 15(4):948-963

Everyone Wins: A Citizen Guide to Development. Planners Press, American Planning Association, Chicago, Illinois.

Critical Watershed Analysis: Tailoring Watershed Management Practices to Benefit Sensitive Aquatic Communities, presented at the Conference on Putting the LID (Low-Impact Development) On Stormwater Management, September 21 - 23, 2004, The Inn and Conference Center—Marriott, College Park, Maryland.

Siting and design considerations to enhance the environmental benefits of golf courses. In: *Handbook of Integrated Pest for Turf and Ornamentals*, edited by Anne R. Leslie, U.S. Environmental Protection Agency, Washington, D.C.

Protecting the aquatic environment from the effects of golf courses. Community & Environmental Defense Services, Post Office Box 206, Maryland Line, MD 21105.

Enhancing the environmental benefits of golf courses. *U.S. Golf Association Green Section Record* March/April 1991 and presented at the 1991 Golf Course Superintendents Conference in Las Vegas, Nevada.

Effects of sediment pollution upon the aquatic environment. Maryland Tidewater Administration, Tawes State Office Building, Annapolis, MD 21401.

Effects of urbanization upon aquatic resources. Maryland Tidewater Administration, Tawes State Office Building, Annapolis, MD 21401.

The effects of boating activity and related facilities upon tidal creeks in Maryland. Community & Environmental Defense Services, Post Office Box 206, Maryland Line, MD 21105.

Restoration of Urban Streams Maryland Tidewater Administration, Tawes State Office Building, Annapolis, MD 21401

Preservation & Enhancement of Stream Quality Maryland Tidewater Administration, Tawes State Office Building, Annapolis, MD 21401.

Numerous reports assessing the potential environmental effects of proposed development projects.