

August 12, 2025

Derby Inland Wetlands Agency
Derby Town Hall
1 Elizabeth Street
Derby, CT 06418

Re: Wetland and Watercourse Assessment
Summit Street Extension, Derby, Connecticut

Dear Members of the Agency:

William Kenny Associates LLC (WKA) investigated the approximate 18-acre primarily undeveloped project site which encompasses five parcels located on Summit Street, Mountain Street, and Coon Hollow Road in the City of Derby, Connecticut to identify, inventory, and assess the existing and proposed inland wetland and watercourse conditions related to the proposed development of the project site. The following letter includes the methods and results of this investigation. Field investigations of wetlands and watercourses were conducted by WKA on April 8 and July 29, 2025. Our work also included a review of the following documentation:

- The plan set titled *Proposed Subdivision: Summit Street Extension*, prepared by Rose Tiso & Co. LLC., dated May 27, 2025.
- The *Site Engineering Design Report*, prepared by Rose Tiso & Co. LLC., dated March 1, 2025.

In summary, based on our completed inventory and assessment, and assuming our recommendations are incorporated into the project, we find that the proposed residential subdivision will not adversely impact inland wetlands or watercourses. No activities are proposed to occur within wetlands or watercourses. As such, no direct adverse impacts will occur. Indirect adverse impacts to inland wetlands and watercourses will be minimized to the greatest extent possible through the implementation of best management practices (BMPs) such as the installation and maintenance of soil erosion and sediment control measures during construction and stormwater best management practices following construction.

Existing Site Conditions

The approximate 18-acre primarily undeveloped project site encompasses five parcels, two on Summit Street (MBL: 9-6 47 & 9-6 47B), two on Mountain Street (MBL: 8-9 94A & 8-9 94), and a portion of one parcel on Coon Hollow Road (MLB: 9-6 17A) in the City of Derby, Connecticut. Summit Street borders the project site to the south, Coon Hollow Road borders to the west, and Mistyvale Lane borders to the southwest. No formal improvements are present at the project site, save for a dirt access drive which extends from the southern central portion of

the site to the central portion of the site. The primary vegetative cover at the project site is a broadleaved deciduous woodland.

The broadleaved deciduous woodland is of a young age class, primarily comprised of canopy level native white oak and hickory trees. The understory is dominated by native sweet birch trees with some American beech trees. Shrubs and groundcovers were exceedingly sparse throughout the woodland, but where present, consisted of low vigor native Pennsylvania sedge, hay scented fern, rhododendron, and blueberry. Soils primarily consist of well drained fine sandy loams formed from glacial till deposits. The southwestern corner of the project site appears to have been heavily disturbed by previous land clearing, excavation, and filling. This area was likely altered and manipulated during the construction of the existing townhouse community just south of the project site. In this portion of the woodland, invasive autumn olive shrubs and oriental bittersweet vines dominate the understory and entangle a majority of the trees. Additional vegetation in this portion of the woodland includes invasive multiflora rose and native raspberry. Soils in this portion of the woodland are well drained fine sandy loams forming in human altered deposits. Overall, the project site habitat and its vegetation are very common in the region. No rare species or habitats were observed during WKA's cursory reviews of the property.

One inland wetland and watercourse system is present at the project site. The system, which extends and flows north to south in the southwest corner of the investigated area is a small manmade drainage ditch with fringes bordering meadow wetlands. The drainage ditch extends along the eastern edge of Coon Hollow Road and is bisected from east to west by Mistyvale Lane. A small culvert maintains surface water flows from the northern to the southern portion of the system. The principal source of water for this system is surface water flow from Coon Hollow Road and the surrounding landscape as well as shallow subsurface groundwater discharge. Water flows continue south and quickly enter a manmade stormwater basin, located southwest of Mistyvale Lane and north of Coppola Terrace. Following this, it is assumed that some surface water infiltrates into the ground and follows natural drainage patterns southwest, discharging to the Housatonic River, located 0.4-miles southwest of the site. However, a majority of the surface water in this basin is likely piped to the town's subsurface stormwater drainage network and conveyed to the Housatonic River. At the time of WKA's July 2025 investigation, the watercourse had a channel width of approximately one to two feet. The meadow wetland which borders the watercourse is heavily disturbed due to the prior construction of large-scale utility towers, activities along Coon Hollow Road, as well as the creation of Mistyvale Lane. As such, the bordering wetlands are dominated by invasive Japanese knotweed. Wetland soils are poorly drained sandy loams forming in human altered deposits.

The primary characteristics of the wetland and watercourse system are provided in the following table.

Table One: Wetland & Watercourse Primary Characteristics

<u>PRINCIPAL SOURCE(S) OF HYDROLOGY</u>	<u>WATER TABLE TYPE</u>	<u>HGM CLASSIFICATION</u>	<u>USFWS CLASSIFICATION</u>	<u>VEGETATION COVER TYPE(S)</u>
SURFACE AND GROUNDWATER INTERCEPTION	PERCHED	SLOPING	PEM1 ¹	MEADOW

¹Palustrine (P); Emergent (EM); Persistent (I);

The primary function of the wetland system is water conveyance as well as storm and floodwater storage. The system also contributes to the abundance and diversity of wetland flora and fauna, however, due to the size of the system as well as the prevalence of invasive vegetation, the capacity of the system to perform these functions is low.

Proposed Site Conditions

The proposed project involves the construction of various infrastructure measures that will be needed for the future (yet to be proposed) 44-lot residential subdivision. The currently proposed activities include land clearing and grading, installation of a public road which will connect to Summit Street and Coon Hollow Road, and the installation of subsurface sewer and water utility lines as well as stormwater management systems. The proposed road will measure 32 feet wide and will also include standard sidewalks on either side of the road. As this development will increase impervious coverage at the project site, the project includes a formal stormwater management plan to capture and detain stormwater runoff from the road now, and through the future development of the project site. At a future date, additional stormwater management systems will be designed and installed as required and permitted by the City of Derby standards to account for the yet to be proposed dwellings and driveways.

Potential Impacts and Mitigation

Land development has the potential to cause short- and long-term as well as direct and indirect adverse impacts to inland wetlands and watercourses from activities such as vegetation clearing, soil filling, excavation and/or pollution of stormwater. The proposed project is designed to avoid these adverse impacts. There will be no direct short- or long-term adverse impacts to wetlands or watercourses on- or offsite, as no activities are proposed within wetland or watercourse systems.

In the short-term, wetlands and watercourses can be indirectly impacted from sediment-laden stormwater runoff from the proposed construction activities. A vast majority of the proposed activities are located relatively far from inland wetlands and watercourses (>300 feet), however, the project does involve significant grading. Activities occurring within close proximity to wetlands and watercourses include the continuation of a pre-existing asphalt road and land clearing and grading. As such, the project proposes control measures such as silt fencing along the limit of disturbance (upgradient of the wetland system) as well as an anti-tracking pad. These measures are designed to ensure sediment remains onsite and is not transported to a location where it could potentially enter the nearby watercourse. WKA recommends that the proposed

stormwater basin, located east of the wetland system, be designed and used as a sediment trap or basin and that it be constructed during the initial phase of the project so that it can be utilized as a sediment trap for the remainder of the activities proposed in that area. During construction, diversion swales and berms should be installed to direct sediment laden waters away from the wetland system and into the sediment trap. The sediment trap and the diversion berms should be shown and labeled on the project's *Soil Erosion Control Plan*. With the inclusion of these recommendations and assurance that the proposed design is in accordance with the *2024 CT DEEP Erosion and Sediment Control Manual*, indirect adverse impacts from soil erosion and sedimentation to inland wetlands and watercourses can be avoided.

In the long-term, and if not properly mitigated, wetlands and watercourses can be indirectly adversely impacted by stormwater runoff that flows from buildings, pavement and vegetated surfaces. The proposed project will increase impervious cover at the property via the proposed public road and sidewalks. To manage runoff from the proposed impervious cover, the project proposes two major stormwater management BMP's. A series of catch basins is proposed to capture and convey stormwater to one of two features. Stormwater runoff in the northern portion of the site will be directed to a subsurface infiltration system. Stormwater falling in the central and southern portions of the site will be directed to a surface stormwater detention basin. WKA recommends that the proposed catch basins extend further west along the proposed road (towards Coon Hollow Road) to ensure that stormwater falling upon new impervious surfaces within close proximity to the wetland system is captured and treated. To ensure proper stormwater quality treatment, WKA recommends that the proposed stormwater basin be sized and designed to treat the required DEEP stormwater quality treatment volume and to include features such as a sediment forebay or a low flow channel to increase the duration of retention during smaller storms and thus increase the ability of the system to filter our potential pollutants. In either the absence of or in addition to these features, WKA recommends that water quality units designed to filter out solids, oils, and greases, be installed at the entrances to the proposed basin and infiltration unit to further manage stormwater quality. According to the project engineer, these systems have been property sized to reduce peak stormwater discharge rates from pre-development rates for up to and including the 100-year storm event. As such, with the implementation of these recommendations and assurance that the proposed design is in accordance with *2024 Connecticut Stormwater Quality Manual*, we find that significant adverse, long-term, indirect impacts to wetlands and watercourses can be avoided.

Wetlands Functions and Values: Existing versus Proposed Conditions

A comparison of the capacity of the wetland and watercourse system to perform typical wetland and watercourse functions before and after the completion of the proposed site improvements was completed. This comparison was generated by evaluating the existing wetland functions and anticipated wetland functions after construction of the project within the context of typical wetland functions and values as established by Normandeau Associates, Inc. in the 1998 publication, *A Rapid Procedure for Assessing Wetland Functional Capacity*. Wetland functions are those self-sustaining properties of a wetland that exist in absence of society.

The comparison of the existing wetland functions and the anticipated wetland functions following implementation of the proposed project revealed that the wetland functions will be

maintained from existing conditions. A summary of this evaluation is presented in the table below.

Table Two: Overall Wetland & Watercourse Functions: Existing Conditions versus Proposed Conditions

<u>WETLAND FUNCTIONS</u>	<u>RELATIVE CAPACITY TO PERFORM FUNCTION</u>		<u>FUNCTIONAL DETAILS</u>
	<u>EXISTING</u>	<u>PROPOSED</u>	
Modification of Groundwater Discharge	LOW-MODERATE	LOW-MODERATE	Unchanged - The capacity of the wetland to influence the amount of water moving from groundwater to surface water will remain the same with the proposed project.
Modification of Groundwater Recharge	LOW	LOW	Unchanged - The capacity of the wetland to influence the amount of water moving from surface water to groundwater will remain the same with the proposed project.
Storm and Flood Water Storage	LOW-MODERATE	LOW-MODERATE	Unchanged - The capacity of the wetland to store floodwater will remain the same with the proposed project.
Modification of Stream Flow	LOW-MODERATE	LOW-MODERATE	Unchanged - The capacity of the wetland to produce or affect the hydrology of a downgrade stream will remain the same with the proposed project
Modification of Water Quality	LOW-MODERATE	LOW-MODERATE	Unchanged - The capacity of the wetland to modify water quality will remain the same with the proposed project.
Export of Detritus	MODERATE	MODERATE	Unchanged - The capacity of the wetland to export organic detritus from the wetland to the adjacent and downstream aquatic ecosystems will remain the same with the proposed project.
Contribution to Abundance and Diversity of Wetland Flora	LOW	LOW	Unchanged - The wetland's capacity to contribute to the abundance and diversity of wetland flora will remain the same with the proposed project.
Contribution to Abundance and Diversity of Wetland Fauna	LOW	LOW	Unchanged - The wetland's capacity to contribute to the abundance and diversity of wetland fauna will remain the same with the proposed project.

Conclusions

We completed an assessment of existing and proposed inland wetland and watercourse conditions related to the proposed residential subdivision, located at five parcels on Summit Street, Mountain Street, and Coon Hollow Road in the City of Derby, Connecticut. Based on this assessment, a review of project documentation, and consultation with the project engineers, and through the implementation of soil erosion and sedimentation measures, as well as a stormwater management plan and our associated recommendations, we conclude that the proposed project will not result in short- or long-term adverse impacts to wetlands or watercourses. Thank you for your consideration of this information. If you should have any questions or comments, please do not hesitate to contact us at (203) 366-0588.

Sincerely,



William L. Kenny, PWS, PLA
Principal



Jackson Smith
Ecologist