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# The Borough of Mendham

*"Preserving the Past - Building the Future"*

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Environmental Commission, Open Space and Shade Tree

Eric Arena, Chairperson

February 16, 2023

Lisa Smith  
Planning and Land Use Coordinator

RE: ECOSST REVIEW - V-FEE MENDHAM APARTMENTS LLC APPLICATION

Dear Lisa,

The ECOSST Commission retained Mr. James Cosgrove, P.E. of One Water Consulting LLC to assist us in reviewing the potential environmental impacts associated with the V-Fee Mendham Apartments, LLC application for a proposed multi-family residential development on Block 801, Lot 20.

Please forward Mr. Cosgrove's review to the Joint Land Use Board for their review of the V-Fee Mendham Apartments LLC application.

Sincerely,

Ted Metzler  
ECOSST – Environmental work group lead



February 15, 2023

Mr. Eric Arena  
Borough of Mendham  
Environmental Commission, Open Space, and Shade Tree Committee  
2 W. Main Street  
Mendham, NJ 07945

**RE: V-FEE MENDHAM APARTMENTS LLC DEVELOPMENT APPLICATION  
84-90 MAIN STREET  
BLOCK 801, LOT 20  
MENDHAM BOROUGH, MORRIS COUNTY**

Dear Mr. Arena:

As you requested, One Water Consulting LLC (One Water) has reviewed the above-referenced application on behalf of the Borough of Mendham Environmental Commission, Open Space, and Shade Tree (ECOSST) Committee. V-Fee Mendham Apartments, LLC has proposed a multi-family residential development on Block 801, Lot 20 in the Borough of Mendham, Morris County, New Jersey. I have prepared this letter to provide comments related to the overall application.

[Please note that many of the comments in this letter were previously provided in our February 2, 2023 letter, which was prepared to address Flood Hazard Area and Freshwater Wetlands permit applications submitted to NJDEP; however, this letter focuses on the entire development application to the Borough of Mendham and includes review of new documents not available to us for our prior review (e.g., Ecological Impact Statement and a supplemental Preliminary and Final Site Plan by Marchetto Higgins Stieve.)]

We have reviewed the following documents to date:

1. Flood Hazard Area Study, Block 801, Lot 20, 84-90 East Main Street, Borough of Mendham, Morris County, New Jersey, by Princeton Hydro, LLC, dated May 2021.
2. NJDEP Flood Hazard Area Control Act Permitting, Proposed Multi-Family Residential Development, Block 801, Lot 20, 84-90 East Main Street, Borough of Mendham, Morris County, New Jersey, by Stonefield Engineering & Design, LLC, dated January 10, 2023.
3. NJDEP Permitting Plans, V-Fee Mendham Apartments LLC, Proposed Multi-Family Residential Development, Block 801, Lot 20, 84-90 East Main Street, Borough of Mendham, Morris County, New Jersey, by Stonefield Engineering & Design, LLC, dated January 10, 2023.
4. Preliminary and Final Site Plans, V-Fee Mendham Apartments LLC, Proposed Multi-Family Residential Development, Block 801, Lot 20, 84-90 East Main Street, Borough of Mendham, Morris County, New Jersey, by Stonefield Engineering & Design, LLC, dated October 20, 2022.
5. Stormwater Management Report, Proposed Multi-Family Residential Development, Block 801, Lot 20, 84-90 East Main Street, Borough of Mendham, Morris County, New Jersey, by Stonefield Engineering & Design, LLC, dated October 20, 2022.

6. Ecological Impact Statement, Proposed Multi-Family Residential Development, Block 801, Lot 20, 84-90 East Main Street, Borough of Mendham, Morris County, New Jersey, by Stonefield Engineering & Design, LLC, dated October 20, 2022.
7. Preliminary & Final Site Plan, Proposed Multi-Family Residential Development, Block 801, Lot 20, 84-90 East Main Street, Borough of Mendham, Morris County, New Jersey, by Marchetto Higgins Stieve, dated October 24, 2022.
8. NJDEP Freshwater Wetlands Letter of Interpretation: Line Verification, File No.: 1418-20-0001.1 dated October 1, 2020.
9. Comment letter from Ferriero Engineering, Inc. to NJDEP, dated January 23, 2023.

### **Flood Hazard Area Issues**

1. There are waters on the west and north sides of the property which have not been fully mapped on the permitting plans prepared by Stonefield Engineering and Design (Permitting Plans):
  - Several channels in the northwest corner of the property.
  - A channel downstream of the 12" diameter pipe adjacent to the gravel path in the rear of the site.
  - Two channels along the west boundary of the property (one on the property and one on the neighboring property).
  - A channel downstream of the 36" diameter pipe outfall on the north portion of the property adjacent to the gravel path. Note that this outfall has not been mapped by the Applicant/Engineer.

These features possess a discernible channel and are connected to a regulated water. In addition, these features contained water during a site visit performed by One Water on January 31, 2023 during a period of dry weather. While stormwater pipes connect to these waters, they appear to be naturally occurring features or waters that historically possessed a naturally occurring discernible channel that have been modified. The applicant should add these features to the plans and properly determine the extent of regulated waters and riparian zones on the development site. Photographs from our site visit are provided in Attachment A.

2. The Permitting Plans show regulated waters extending onto the property on the northwest corner of the site. These features do exist and are much more extensive than what is shown, as described in Comment 1. However, the 150-foot and 300-foot riparian zones do not take these regulated waters into account. Note that if the riparian zones were drawn based on these regulated waters, the proposed stormwater outfall would be within the 150-foot inner Category One (C1) Riparian Zone. A stormwater discharge to the inner 150-foot riparian zone is not permitted.
3. The regulated waters on the property are C1 waters. The proposed discharges from the new development will be conveyed through stormwater outfalls that are within the 300-foot riparian zone. Therefore, the Applicant/Engineer should demonstrate compliance with N.J.A.C. 7:13-11.2(j)4 including reduction of the post-construction

- load of total suspended solids by 95% of the anticipated load from the development site.
4. There is a 36" diameter stormwater outfall located on the north portion of the property that has not been mapped by the Applicant/Engineer. Stormwater runoff from the development site will be conveyed through this outfall. The outfall was covered with a brush pile, with no conduit outlet protection observed. The outfall should be reconstructed to comply with New Jersey Soil Erosion and Sediment Control Standards. Disturbance related to maintenance and reconstruction of the stormwater outfall should be included in the NJDEP permit application package.
  5. A limit of disturbance is shown around a paved pad, gravel play area and shed in the rear of the property. Additional disturbance will be required to the vegetated areas around these structures for access and construction. The limit of disturbance should reflect a reasonable area for purposes of demolition work. There are existing trees in close proximity to these structures. The applicant/engineer should clarify if these trees will remain or be removed.
  6. The limit of disturbance is shown to be at the edge of the proposed building in the rear of the property. However, additional disturbance will be required for construction access and to account for the limits of excavation and foundation construction. The limit of disturbance should reflect a reasonable area for purposes of access and construction.
  7. The flood hazard area has been delineated using Method 6, based on the Flood Hazard Area Study by Princeton Hydro, LLC, dated May 2021. Note that there is no NJDEP Department Delineation or FEMA Delineation of the floodplain in the project area. The flood hazard area is of critical importance to this project due to the multi-family residential nature of the development. We have the following comments related to the Flood Hazard Area Study:
    - a. The NJDEP Flood Hazard Area Technical Manual (FHA TM) provides detailed requirements and procedures for performing Method 6 Calculations. The Flood Hazard Area Study should be revised to follow these NJDEP requirements.
    - b. We have run USGS StreamStats as a point of reference for the total drainage area to the stream at the site. The StreamStats report is provided as Attachment B which shows a drainage area of 173 acres, which is more than double the area of 75 acres presented in the Flood Hazard Area Study.
    - c. The approximate method (Method 5) was analyzed for the site based on a drainage area of 173 acres in Watershed Management Area 8. The resulting flooding depth from Method 5 is 9 feet. However, the Flood Hazard Area Study indicates flooding depths of approximately 1 foot at the cross-sections at the site. This much of a discrepancy is unusual, and we recommend the applicant confirm that the method 6 calculations are accurate.
    - d. The Hydrologic and Hydraulic Analysis must extend at least 500 feet upstream and downstream of the property limits. However, the most upstream cross

section is just off of the property boundary, and the most downstream cross section runs right through the proposed development. The Hydrologic and hydraulic model must be extended to accurately calculate the floodway and floodplain on the site.

- e. The Hydrologic and Hydraulic Analysis must include all downstream structures. For example, there is an existing culvert under the walking path (Patriots Path) just downstream of the model limits. See photograph of the existing culvert under Patriots Path in Attachment A. This culvert should be included since it may cause backwater that impacts flood elevations on the project site.
- f. The cross-section areas identified as “ineffective flow” in Sections 1407 through 1622 actually receives runoff from an outfall off of Dean Road. See photograph of outfall in Attachment A. The contributory watershed to this outfall should be included in the model, with this channel modeled as a separate reach.
- g. A signed and sealed topographic map should be provided (or multiple maps to maintain clarity) showing the following:
  - i. The boundaries of the drainage area
  - ii. The time of concentration flow path within the drainage area, marking each segment of sheet flow, shallow concentrated flow, and open channel flow
  - iii. An overlay of the soils types within the drainage area
- h. A map showing the land use/land cover within the contributory drainage areas should be provided.
- i. A curve number of 98 for open water/wetland areas should be utilized.
- j. The applicant has used the Watershed Lag Method for the time of concentration. However, the Velocity Method is recognized by the NRCS as the best computational method in urbanizing watersheds. As such, the Velocity Method is the NJDEP’s preferred method for computing the time of concentration in most cases. The applicant/Engineer should calculate time of concentration using the Velocity Method, including using the McCuen-Spiess limitation.
- k. Computations showing the calculated time of concentration, including each of the sheet flow, shallow concentrated flow, and open channel flow segments should be provided.
- l. Photographs at each cross-section documenting the land cover in the channel, left overbank, and right overbank to support the selection of the Manning’s n value in these areas should be provided.

- m. Signed and sealed cross-sections plotted on engineering drawings with all cross-sections drawn looking downstream should be provided with the channel and immediate overbank areas field surveyed.
- n. A topographic plan showing location, orientation, and lateral extent of each cross-section should be provided.
- o. A plan view of the calculated flood hazard limits should be provided.
- p. The limits of the floodway shown in plan view and the left and right encroachment stations shown on each cross-section should be provided.
- q. Five pages of warning messages are included in the output results from HEC-RAS. The Applicant/Engineer must explain why the warning messages do not invalidate the results of the model and document the steps that were taken to resolve the warning messages.

### **Wetlands Issues**

1. The perimeter wooded areas and wetlands around the development site are listed in the NJDEP Landscape Project as habitat for Barred Owl, Veery, Indiana Bat, Bobcat, and Great Blue Heron. The proposed project will result in disturbances to the transition area of these wetlands and associated habitat. The applicant should indicate the expected impacts on this extensive list of threatened and endangered species.
2. A limit of disturbance is shown around a paved pad, gravel play area and shed in the rear of the property. Additional disturbance will be required to the vegetated areas around these structures for access and construction. The limit of disturbance should reflect a reasonable area for purposes of demolition work. There are existing trees in close proximity to these structures. The applicant/engineer should clarify if these trees will remain or be removed.
3. The limit of disturbance is shown to be at the edge of the proposed building in the rear of the property. However, additional disturbance will be required for construction access and to account for the limits of excavation and foundation construction. The limit of disturbance should reflect a reasonable area for purposes of access and construction.
4. The applicant is applying for a Transition Area Waiver in accordance with N.J.A.C. 7:7A-8.1(d). This type of waiver requires the applicant demonstrate that the proposed project will not have substantial impacts on the adjacent wetlands. The applicant is proposing a major development directly adjacent to C1 surface waters, exceptional resource value wetlands and significant threatened and endangered species habitat. It would not seem appropriate for a waiver to the regulations be granted at this site.
5. Unmapped trees are present within the limit of disturbance, including in areas designated to be permitted under a Transition Area Waiver in accordance with N.J.A.C. 7:7A-8.1(d). The applicant should survey all trees within the proposed limit of disturbance.

### **Highlands Issues**

1. The proposed project is a major development located within the Highlands Planning Area. The applicant should obtain a determination from NJDEP regarding whether any permits or approvals are required under the Highlands Act.
2. The applicant is proposing a change in use of the proposed property that may result in additional water and sanitary sewer service requirements. Determination should be made that the proposed project is consistent with the applicable Water Allocation Permit and Water Quality Management Plan.

### **Contaminated Sites Issues**

1. The multi-family residential site is proposed on a property that is listed as an active known contaminated site (Caroline Cleaners at Mendham Shopping Center). The applicant should provide information on how the contamination on the site is being addressed, whether the site is suitable for residential use, and how the proposed development will comply with all applicable local, state and federal regulations regarding contamination on residential sites.

### **Stormwater Issues**

1. Ferriero Engineering, Inc. has submitted comments to NJDEP in a letter dated January 23, 2023 focused on the stormwater management design for the proposed development. We agree with the comments and concerns listed in that letter.
2. The new vehicle traffic areas and proposed areas of pavement reconstruction should be treated for water quality in accordance with the stormwater management regulations. In addition, the proposed development discharges to stormwater outfalls that are within the 300-foot riparian zone. Therefore, the Applicant/Engineer should demonstrate compliance with N.J.A.C. 7:13-11.2(j)4 including reduction of the post-construction load of total suspended solids by 95% of the anticipated load from the development site. This requirement applies regardless of whether or not the site is redeveloped (see NJDEP Stormwater Rule Frequently Asked Questions).
3. The stormwater management hydrologic analysis should be revised to include all stormwater outfalls and discharge points from the site. Hydrograph comparisons should be provided to show that the post-development flows do not exceed pre-development flows at any point in time. All proposed BMPs (i.e. pervious pavement) should be included in the proposed conditions hydrologic analysis.

### **Ecological Impact Issues**

1. The Ecological Impact Statement (EIS) provides insufficient detail to determine the extent of potential impacts of the development on the surrounding environmentally sensitive areas. The applicant should provide additional detail, particularly on the impacts to the surrounding environment (i.e., existing woodland, wetlands, threatened and endangered species, Category One waterways, etc.).



2. The water quality section incorrectly notes that surface water quality in the area is low to moderate. In fact, the surface water quality is designated as Category One, which is the highest designation in New Jersey for protection from measurable changes in water quality characteristics because of their clarity, color, scenic setting, other characteristics of aesthetic value, exceptional ecological significance, exceptional recreational significance, exceptional water supply significance, or exceptional fisheries resource(s). The surface water quality classification is also designated as trout production waters. The EIS should correctly document the surface water quality classification and provide details as to how the water quality could be impacted by the project.
3. The EIS notes that there is a 150-foot riparian zone associated with the stream. The riparian zone is 300 feet due to the Category One classification for surface water quality.
4. See comments from the Flood Hazard Area Issues section of this letter, as they apply to the Flood Hazard Area & Floodplains sections of the EIS.
5. It should be noted in the existing water and wastewater uses section of the EIS that the existing Club at Mendham is no longer in business.
6. The EIS section on hydrology should be updated to indicate all discharge points from the site. There are at least three existing discharge points.
7. The EIS should note existing threatened and endangered species and mapping in the surrounding areas, including Barred Owl, Veery, Indiana Bat, Bobcat, and Great Blue Heron. The expected impacts to these species should be quantified and any impact mitigation techniques proposed should be identified.
8. The Mendham Historic District is on the New Jersey and National Registers of Historic Places. The EIS should make reference to the Mendham Historic District and provide information regarding the proximity of the project and potential impacts.
9. The project proposes a new automotive sales and service establishment at the site. More detail should be provided on the extent of the automotive sales and service use on the site. Does the proposed use include automotive repair, salvage, recycling of parts, etc.? Is there any potential exposure to hazardous materials on the surrounding environment and proposed residential uses? Depending on the nature of the work, additional stormwater permitting could be required by NJDEP. In addition, the EIS should address the potential impacts of the automotive sales and service establishment on all ecological resources, including air quality, water quality, wetlands, noise levels, traffic, etc.
10. The project proposes a significant increase in both potable water demand and wastewater demand. Is there sufficient capacity within the municipal systems to provide the service that is required? The Applicant/Engineer should confirm that there is sufficient water and wastewater conveyance and treatment capacity and that approvals have been obtained through the NJDEP wastewater management planning, treatment works approval, and water allocation permitting processes. Potable water demand should also include fire flow requirements for the proposed uses.



If you have any questions, please do not hesitate to contact me via telephone at 609-462-9383 or via e-mail at [JCosgrove@OneWaterNJ.com](mailto:JCosgrove@OneWaterNJ.com).

Sincerely,

A handwritten signature in blue ink that reads "James Cosgrove" with a stylized flourish at the end.

James F. Cosgrove, Jr., P.E.  
Principal

**ATTACHMENT A**  
**SITE PHOTOGRAPHS**



**Open Space and Trees in Rear Portion of Property**



**Stream at 12" Diameter Pipe Outfall at Northwest Portion of Property**





**Stream Located in Northwest Portion of Property**



**Stream along Western Boundary of Property Adjacent to Development**





**Stream in Northwest Portion Property Extending Towards Development Area**



**Stream Located in Northwest Portion of Property**





**Stream Located on Neighboring Property to the West of the Site**



**12" Diameter Outfall to the West of the Development Area**





**Headwall and Stream to the West of the Development Area**



**Stream to the North of the Development Area**



**36" Diameter Pipe Outfall Covered in Brush Pile to the North of Development Area**



**Existing Building with Adjacent Trees**





**Existing Building and Tree to the East of the Development Area**



**Rear Portion of Property with Buildings, Open Space and Trees**



**Culvert under Patriot's Path Downstream of Property**



**Outfall and Stream off of Dean Road**

**ATTACHMENT B**  
**USGS STREAMSTATS REPORT**



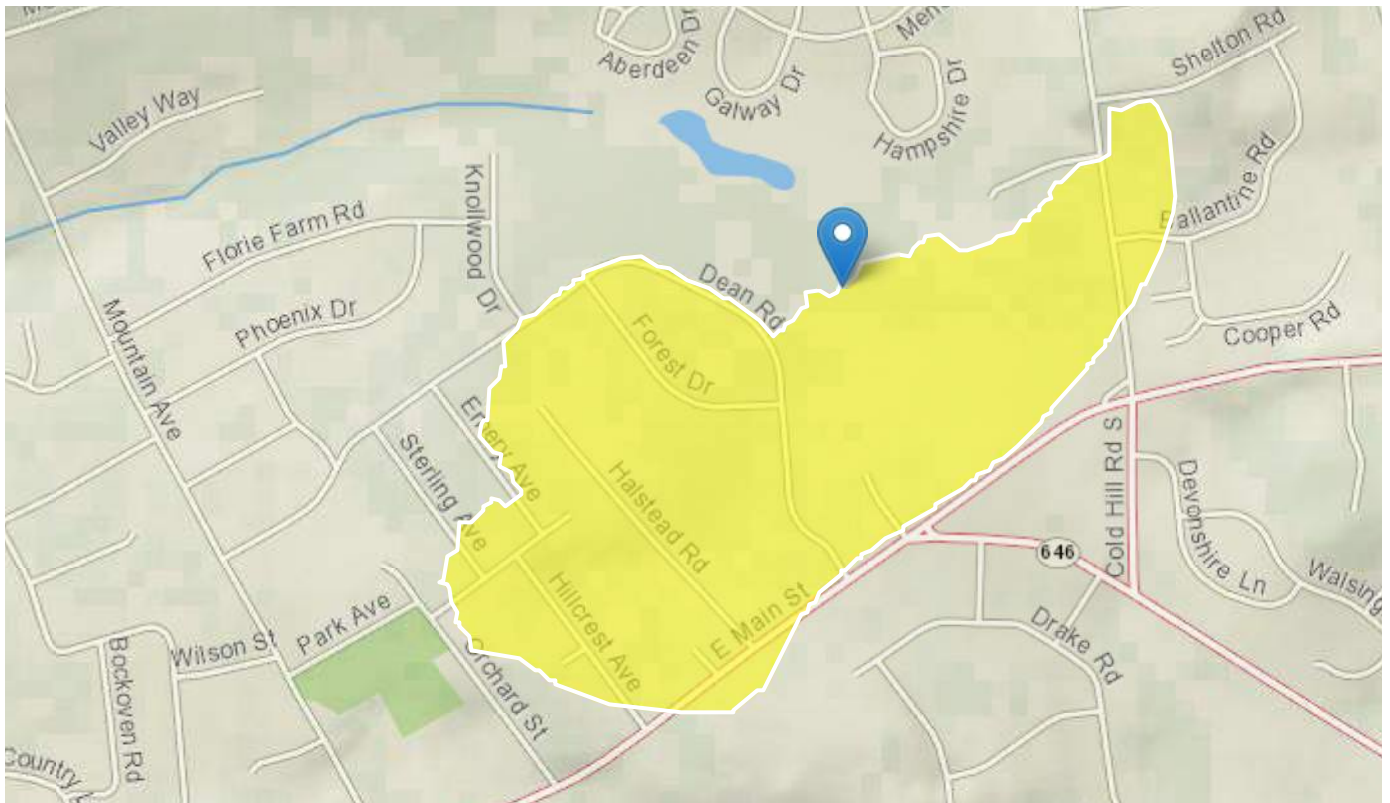
# StreamStats Report

Region ID: NJ

Workspace ID: NJ20230202014832148000

Clicked Point (Latitude, Longitude): 40.78509, -74.59130

Time: 2023-02-01 20:48:52 -0500



[+ Collapse All](#)

## ➤ Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
CSL10_85	Change in elevation divided by length between points 10 and 85 percent of distance along main channel to basin divide - main channel method not known	115	feet per mi
DRNAREA	Area that drains to a point on a stream	0.27	square miles



<b>Parameter Code</b>	<b>Parameter Description</b>	<b>Value</b>	<b>Unit</b>
POPDENS	Basin Population Density	755	persons per square mile
STORAGE	Percentage of area of storage (lakes ponds reservoirs wetlands)	12.4	percent

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Application Version: 4.12.0

StreamStats Services Version: 1.2.22

NSS Services Version: 2.2.1