



November 16, 2023

Email [amcmanus@mashpeeema.gov]

Mashpee Conservation Commission
16 Great Neck Road North
Mashpee, MA 02649

**Re: Preliminary Peer Review Report
DEP File #SE 043-3237
275 Quinaquisset Avenue
Mashpee, Massachusetts**

[LEC File #: TOMa\23-240.01]

Dear Members of the Commission:

LEC Environmental Consultants, Inc., (LEC) is pleased to submit this Preliminary Peer Review Report associated with the Notice of Intent (NOI) Application filed for the proposed residential development at 275 Quinaquisset Avenue in Mashpee, Massachusetts. This report is based on review of the NOI, *Cranberry Point at Willowbend Site Construction Plans*, prepared by Baxter Nye Engineering & Surveying, last revised through October 13, 2023, a site evaluation on November 3, 2023, and review of the applicable regulations and performance standards contained in the *Massachusetts Wetlands Protection Act* (“WPA”, M.G.L. c. 131, s. 40) and its implementing *Regulations* (310 CMR 10.00), and the *Town of Mashpee Wetland Protection Bylaw and Regulations* (Chapter 172).

Project and Site Description

The proposed project involves construction of 12 single-family “cottages” with detached garages, a paved access roadway and driveways, a stormwater management system, and a village green. The project will tie into existing utilities in Quinaquisset Avenue, including the Willowbend Wastewater Treatment Facility. No new septic systems are proposed.

According to the NOI, the project site includes two parcels associated with 275 Quinaquisset Avenue (Lots 32 and 169), as well as Lot 117 which is the 228-acre Willowbend Golf Course and cranberry bog complex. Lots 32 and 169 currently contain an existing single-family dwelling, sheds, a septic system, paved driveway, and lawn area. The existing development on these lots is concentrated around the dwelling, with extensive forested uplands to the west and forested uplands and wetlands to the east of the driveway/dwelling. Portions of the forested upland to the west contain remnant ditches associated with historic bog construction activity; however, no wetlands were observed in these areas. Further west on Lot 117, active cranberry bogs extend south from Quinaquisset Avenue along the westerly property line with Lot 117. Quaker Run, a perennial stream, flows south through the bogs and golf course. Active cranberry bogs are also located to the north and south along with the golf course on Lot 117.

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The project involves permanent alteration to Wetland Resource Areas, including Riverfront Area, Bordering Vegetated Wetlands (BVW), and Isolated Vegetated Wetlands (IVW). Permanent disturbances are also proposed in the Buffer Zone to BVW and IVW.

Summary of Wetland Impacts and Mitigation

According to the revised plans, the project involves the following impacts to Wetland Resource Areas:

- BVW: 2,269 square feet
- IVW: 4,247 square feet
- Riverfront Area: 30,345 square feet
- Buffer Zone: 81,064 square feet

Wetland impacts have been significantly scaled back since filing of the NOI which originally proposed 45,906 square feet of BVW/IVW impact, primarily resulting from the village green being proposed within the BVW, in addition to 49,271 square feet of Riverfront Area alteration. The village green has been relocated and reduced in size on the revised plans. The proposed mitigation involves BVW and Riverfront Area restoration of an active cranberry bog located adjacent to the west of the project, totaling 2.7 acres. A bog road located between the bog and project would also be restored with native vegetation, totaling 8,126 square feet of Riverfront Area and Buffer Zone restoration. In addition, the existing septic system will be abandoned and new development connected to the existing wastewater treatment system, and the stormwater management system will collect and treat runoff from Quinaquisset Road which flows untreated into the BVW under existing conditions.

Preliminary Review Comments

The NOI contains limited information regarding regulatory compliance under the state (WPA) and Mashpee *Regulations*. As a result, LEC is providing these preliminary review comments with the expectation that a more comprehensive review report will be submitted to the Commission after the Applicant submits the additional information requested.

MassDEP provided comments on the original NOI filing which are quoted below. While the project has been scaled back, the comments largely stand and require further analysis.

DEP Comments: 310 CMR 10.55(4)(b) states: "the issuing authority may (not shall) issue an Order of Conditions permitting work which results in the loss of up to 5000 square feet of Bordering Vegetated Wetland... In the exercise of this discretion, the issuing authority shall consider the magnitude of the alteration and the significance of the project site to the interests identified in M.G.L. c. 131, S 40, the extent to which adverse impacts can be avoided, the extent to which adverse impacts are minimized, and the extent to which mitigation measures, including replication or restoration, are provided to contribute to the protection of the interests identified in M.G.L. c. 131, S 40." Demonstrate compliance with 310 CMR 10.55(4)(b)1. through 7. Provide calculations for Commission to determine if the IVW is an Isolated Land Subject to Flooding per 310 CMR 10.57(2)(b)1. and 3, or is a Pond per 310 CMR 10.04 Pond. 310 CMR 10.58(4) states "Where the presumption set forth in 310 CMR 10.58(3) is not overcome, the applicant shall prove by a preponderance of the evidence that there are no practicable and substantially equivalent



economic alternatives to the proposed project with less adverse effects on the interests identified in M.G.L. c. 131 S 40 and that the work, including proposed mitigation, will have no significant adverse impact on the riverfront area to protect the interests identified in M.G.L. c. 131 S 40...” 310 CMR 10.58(4)(c) states “There must be no practicable and substantially equivalent economic alternative to the proposed project with less adverse effects on the interests identified in M.G.L. c. 131 S 40.” 310 CMR 10.58(4)(c)1. states “... The alternatives analysis may reduce the scale of the activity or the number of lots available for development, consistent with the project purpose and proposed use...” 310 CMR 10.58(4)(c)1.a. states “... Cost does not include anticipated profits after the project purpose is achieved or expenditures to achieve the project purpose prior to receiving an Order...” Demonstrate compliance with the applicable Riverfront Area Performance Standards 310 CMR 10.58(4)(a) through (d) or 310 CMR 10.58(5)(a) through (h). Additional information should be provided to the Conservation Commission in the manner in which they require as well as MassDEP via email to Andrew.Poyant@mass.gov.

Wetland Delineation

During the site evaluation on November 3, 2023, LEC reviewed the wetland delineation and has a few comments to be addressed by the Applicant. Generally, the wetland delineation was found to be accurate. We noted that wetland flag (WF) A-23 should be shifted closer to the road to include an area with wetland hydrology and hydric soils. LEC hung flag WF A-23R in the field in the revised location. In addition to field reviewing this suggested revision, we request the Wetland Scientist revisit the field conditions between WF B-01/B-02, WF A-11/A-12, and the adjacent cranberry bog. The B-series IVW flagging is located less than 10 feet from the A-series BVW and the cranberry bog, and some evidence of surficial hydrology connecting the areas was observed in the field. Based on the similar topography within these areas, they may be connected. The Applicant’s Wetland Scientist should revisit this area and provide a detailed analysis of potential connections between the B-series IVW and the A-series BVW and cranberry bog. A connection to either area would result in reclassifying the IVW as BVW. LEC is willing to meet the Applicant’s Wetland Scientist on-site to review in the field.

BVW Impacts

The project involves BVW impacts associated with the construction of proposed Cottages 9, 10, and 11 and a small portion of BVW impacts associated with construction of the stormwater management basin adjacent to Quinaquisset Avenue. There is no wetland replication proposed.

The Applicant should provide a detailed analysis of the performance standards in the state *Regulations* for BVW with a focus on 310 CMR 10.55 (4)(b), and Regulations 19 (Freshwater Wetlands) and 20 (Wildlife Habitat Evaluation Requirements/Replication Requirements) of the *Bylaw Regulations*, including an alternatives analysis exploring alternative project designs that would avoid or further minimize BVW/IVW impacts. Regulation 20 of the *Bylaw Regulations* requires a Wildlife Habitat Evaluation for greater than 300 square feet of Freshwater Wetlands proposed to be altered.

As reviewed by MassDEP in their initial project review comments, 310 CMR 10.55(4)(b) states *the issuing authority may (not shall) issue an Order of Conditions permitting work which results in the loss of up to 5000 square feet of Bordering Vegetated Wetland... In the exercise of this discretion, the issuing authority*

shall consider the magnitude of the alteration and the significance of the project site to the interests identified in M.G.L. c. 131, S 40, the extent to which adverse impacts can be avoided, the extent to which adverse impacts are minimized, and the extent to which mitigation measures, including replication or restoration, are provided to contribute to the protection of the interests identified in M.G.L. c. 131, S 40.

It is our understanding and experience that BVW filling must be mitigated with wetland replication under the WPA Regulations and that there is no regulatory pathway for the Commission to accept other forms of mitigation. While the project proposes to enhance the existing cranberry bog BVW through abandonment, there is still a net loss of 2,269 square feet BVW.

Riverfront Area Impacts

The western portion of the development, including Cottages 1-7 and a portion of Cottage 8, are located within the Riverfront Area. The *Master Mitigation Plan* (Sheet C6.0 of the revised plans) depicts hatching and calculations for “Outer Riparian Buffer Impact” totaling 30,345 square feet. This hatching appears to be inaccurate in that it excludes Riverfront Area impacts associated with Cottage 3 through Cottage 7 and the area between Cottage 1 and Quinaquisset Road. It appears that the Riverfront Area near Cottage 3 through Cottage 7 was excluded based on the treeline/lawn survey data; however, the only areas that may be excluded from Riverfront Area calculations must meet the criteria of Previously Developed Riverfront Area per 310 CMR 10.58 (5). This would be limited to a small portion of the existing dwelling and any sheds that extend into the Riverfront Area. All other areas contain topsoil and do not qualify as Previously Developed Riverfront Area.

Once the calculations are performed, the Applicant should provide a detailed analysis of the state *Regulations* and performance standards for Riverfront Area under 310 CMR 10.58 (4), including a detailed alternatives analysis demonstrating there are no practicable and substantially equivalent economic alternatives to the proposed project with less adverse effects on the Riverfront Area.

IVW Impacts

The project involves separate IVW impacts associated with construction of a village green and behind proposed Cottage 6. The wetland to be filled for the village green may actually be BVW pending the additional field evaluation requested above. Regardless, the Applicant should provide an analysis of the extent to which adverse impacts can be avoided or minimized, including the need and use of the village green amenity including a description of users, access and other landscape/hardscape features that would be included in the village green since it is proposed partially in the location of existing golf course features.

As stated above, Regulation 20 of the *Bylaw Regulations* requires a Wildlife Habitat Evaluation for greater than 300 square feet of Freshwater Wetlands proposed to be altered.

Mitigation

As noted above, restoration of 2.7 acres of active cranberry bogs is proposed as mitigation for the wetland and Riverfront Area impacts associated with the project. In addition, the project will tie into the Willowbend Wastewater Treatment Facility which will remove the existing septic system and ensure no new septic systems are constructed on the property. The proposed stormwater management system will



intercept and treat stormwater from Quinaquisset Avenue which is currently flowing untreated into the BVW. These mitigation measures will provide significant benefit to the Wetland Resource Areas and protection of the interests of the state *Regulations* and the *Bylaw Regulations*. Prior to contemplating the mitigation, it is important for the regulatory information requested above to be submitted and analyzed. While the mitigation offered clearly has value, the Commission must be certain that the Resource Area impacts have been accurately quantified, that alternatives that would avoid or reduce impacts have been explored, and that the *Regulations* allow such mitigation. Once those issues are addressed in writing, additional details regarding the bog restoration aspect of the mitigation may be requested.

Thank you for the opportunity to assist with this project. If you have any questions or require additional information regarding this proposal, please do not hesitate to contact me.

Sincerely,

LEC Environmental Consultants, Inc.

A handwritten signature in black ink, reading "Mark L. Manganello", is positioned above the printed name.

Mark L. Manganello

Assistant Director of Ecological Services