

Staff Report

Date: December 17, 2020
To: Conservation Commission
From: Whitney McClees, Conservation Agent
Subject: **18 Bass Creek Road – Abbreviated Notice of Resource Area Delineation –
DEP# 023-1332, Fairhaven CON 023-173**

DOCUMENTS REVIEWED

- Abbreviated Notice of Resource Area Delineation and associated documents
- 310 CMR 10.00
- Fairhaven Wetlands Bylaw (Chapter 192)

RESOURCE AREAS ON/NEAR SITE

- Bordering Vegetated Wetland
- Bank of Intermittent Stream
- Buffer Zone
- Land Subject to Coastal Storm Flowage (LSCSF) Zone VE

PERFORMANCE STANDARDS

- Since no work is proposed and the applicant is seeking boundary confirmation only, I am not including the performance standards for each of the above resource areas.

PROJECT SUMMARY

- The applicant is seeking confirmation of a BVW boundary and has not indicated additional resource areas on the application.
- The applicant's wetland scientist notes that there is an intermittent stream onsite and has delineated the bank of said stream, though it is not labeled as such on the plan.

COMMENTS

- During a site visit, I walked the line with the applicant and took a look at the soils at a couple of the flags. I did not conduct a thorough review of the line, which would likely take a full day.
- The delineation deviates fairly significantly from the DEP wetlands layer on MassGIS as well as the NRCS soil map. Additionally, one of the species of maple listed as occurring on the site does not naturally occur in this area.
- The first hearing for this project was September 14, 2020, for which we did not yet have a DEP number. The public hearing was able to be open and the project discussed, but not closed due to the absence of a file number. At that meeting, the Commission voted to have the line reviewed by the Agent at no cost to the applicant.
- In coordinating with the applicant, he declined to have the Agent do the peer review and opted to pay for a third-party peer reviewer instead.
- The applicant requested and received continuances for the meetings between September 14 and December 7 to allow time for the peer review to be completed and then to address the peer review.

- The peer review was initiated, but the wetland flags were removed halfway through the review so it has not yet been completed. The preliminary information indicated that the original line was incorrect.
- At the last meeting, the Commission and applicant agreed that the peer review would be completed for the next meeting and the peer reviewer would attend.
- The property owner did not provide permission for the peer reviewer to access the property, so the peer review was not completed. As such, I did not request their presence at the 12/21 meeting so as not to waste the applicant's money.
- A 2018 site plan for 20 Bass Creek Road shows most of the area under this filing to be BVW.

RECOMMENDATION

- I recommend asking the applicant if they would like to request a continuance to allow time to both submit the revised plan and have the peer reviewer complete her review.

Staff Report

Date: December 18, 2020

To: Conservation Commission

From: Whitney McClees, Conservation Agent

Subject: **Hiller Avenue and Timothy Street, Assessors Map 28C, Lots 71 & 71A – Notice of Intent – DEP#023-1297, Fairhaven CON-19-051**

DOCUMENTS REVIEWED

- Notice of Intent and associated attachments submitted
- 310 CMR 10.00
- Fairhaven Wetlands Bylaw (Chapter 192)
- Peer review by GCG Associates dated December 30, 2019
- Exhibit plan dated December 3, 2020
- Revised plans dated December 3, 2020
- Revised stormwater report dated January 10, 2020
- Peer review reply letter dated January 13, 2020

RESOURCE AREAS ON/NEAR SITE

- Bordering Vegetated Wetland
- Buffer Zone

PERFORMANCE STANDARDS

- **Bordering Vegetated Wetland:** 10.55(4)
 - (a) work in a Bordering Vegetated Wetland shall not destroy or otherwise impair any portion of the BVW
 - (b) The ConCom may permit the loss of up to 5000 square feet of BVW when said area is replaced IF:
 1. The area is equal;
 2. The ground water and surface elevation are approximately equal;
 3. The overall horizontal configuration and location are similar;
 4. There is an unrestricted hydraulic connection to the same water body or waterway;
 5. It is in the same general area of the water body;
 6. At least 75% of the surface of the replacement area shall be reestablished with indigenous wetland plant species within two growing seasons; and
 7. The replacement area is provided in a manner which is consistent with all other regs in 310 CMR 10.00.
 - (c) The ConCom may permit the loss of a portion of BVW when;
 1. Said portion has a surface area less than 500 square feet;
 2. Said portion extends in a distinct linear configuration ("finger-like") into adjacent uplands; and

3. In the judgment of the issuing authority it is not reasonable to scale down, redesign or otherwise change the proposal.
 - (d) No project may be permitted which will have any adverse effect on specified habitat sites of rare species
 - (e) No work shall destroy or otherwise impair any Area of Critical Environmental Concern
- **Buffer Zone General Provisions:** 10.53(1) "For work in the Buffer Zone subject to review under 310 CMR 10.02(2)(b)3., the Issuing Authority shall impose conditions to protect the interests of the Act identified for the adjacent Resource Area. ... where prior development is extensive, may consider measures such as the restoration of natural vegetation adjacent to a Resource Area to protect the interest of [the Act]. ... The purpose of preconstruction review of work in the Buffer Zone is to ensure that adjacent Resource Areas are not adversely affected during or after completion of the work."

PROJECT SUMMARY

- The Notice of Intent was filed for the construction of paved roadways and stormwater management systems and the installation of utilities, including the placement of fill for the aforementioned work, for a proposed 16-lot subdivision.

COMMENTS

- From 310 CMR 10.00 Preface to the Wetlands Regulations, 2005 Revisions:
 - "Research on the functions of buffer zones and their role in wetlands protection has clearly established that buffer zones play an important role in preservation of the physical, chemical, and biological characteristics of the adjacent resource area. The potential for adverse impacts to resource areas from work in the buffer zone increases with the extent of the work and the proximity to the resource area."
 - "Extensive work in the inner portion of the buffer zone, particularly clearing of natural vegetation and soil disturbance is likely to alter the physical characteristics of resource areas by changing their soil composition, topography, hydrology, temperature, and the amount of light received. Soil and water chemistry within resource areas may be adversely affected by work in the buffer zone. Alterations to biological conditions in adjacent resource areas may include changes in plant community composition and structure, invertebrate and vertebrate biomass and species composition, and nutrient cycling. These alterations from work in the buffer zone can occur through the disruption and erosion of soil, loss of shading, reduction in nutrient inputs, and changes in litter and soil composition that filters runoff, serving to attenuate pollutants and sustain wildlife habitat within resource areas."
- From 310 CMR 10.00 Preface to the 1983 Regulations:
 - "Any project undertaken in close proximity to a wetlands resource area has a high likelihood of resulting in some alteration of that area, either immediately or as a consequence of daily operation of the completed project. The problem becomes particularly severe when Bordering Vegetated Wetlands are involved; inadvertent damage to these sensitive areas can easily occur and in many instances is irreparable."
- From the MACC Wetlands Buffer Zone Guidebook:
 - Most studies find that buffers dominated by trees or a mix of vegetative cover types, structure, and age classes are most effective in removing nutrients and sediment pollution.

- Vegetated buffers between 30 and 100+ feet appear to be effective in reducing sediments, phosphorus, and nitrogen with 75% removal rate.
- Additional benefits of vegetated buffers:
 - phosphorus and sediment removal capacity is most effective within 50 feet of the resource area.
 - nitrogen removal capacity is most effective within at least 100 feet of the resource area.
 - vegetated buffer width of minimum 50 feet is most effective to maintenance of water temperature.
 - buffers of less than 50 feet are more susceptible to degradation by human disturbance. Buffers of 25 feet or less do not function in a meaningful way to reduce disturbance to the adjacent wetland.
 - During flood events, buffer zones become backup flood storage areas and minimize water quality and storm damage impacts from floods and severe storm events.
- When reviewing a project in the buffer zone, it is important to consider:
 - Will the project substantially reduce the capacity of the buffer zone to slow, detain, filter, store, and infiltration runoff prior to reaching the resource area?
 - Will the project substantially reduce the capacity of the buffer zone to protect wildlife habitat functions of the wetland resource area?
 - Will the project substantially reduce existing buffer zone vegetation that provides protection to resource area vegetation, thus potentially reducing the functional capacity of the adjacent resource area?
 - Is the existing or proposed undisturbed buffer zone suitable to maintain sediment, pollutant, pathogen, and nutrient removal capacity of the adjacent resource area?
 - Can the project be reasonably shifted or modified to allow work and also the necessary buffer zone protection of resource area sediment, pollutant, pathogen, and nutrient removal, flood control, storm damage prevention, and protection of wildlife habitat functions?
- Both proposed detention ponds are located directly next to the wetlands on the property and portions of all three roadways fall within the 100-foot buffer zone to the wetlands. 10 of the 16 proposed house lots fall within the jurisdiction of the Conservation Commission.
- Several of the lots are comprised of predominantly wetland (e.g. Lots 8, 9, and 12), which may cause encroachment into the wetlands and potential for violations in the future. Many of these lots will likely need permits through the Conservation Commission for any proposed future work, whether that is the construction of homes or any additions to homes already constructed, such as decks, pools, or patios.
- The amount of work proposed currently and work that will be proposed in the future comprises a significant portion of the inner buffer zone. Significantly reducing the amount of vegetation, especially mature trees, in the buffer zone can have negative impacts on the wetland, such as increased temperatures and a reduction in pollutant filtration. Significantly increasing the number of homes in the area has the potential to increase the amount of fertilizers, herbicides, and pesticides that runoff into the wetland.
- Several of the proposed driveways and portions of the roadways are within 25 to 50 feet of the wetland, which increases the potential for the alteration of hydrology in the wetland.

- Undisturbed buffer zones are important to protect the wetland’s ability to perform its ecosystem functions: public or private water supply, groundwater supply, flood control, storm damage prevention, prevention of pollution, and wildlife habitat.
- Currently, the project proposes to clear a significant portion of the 100-foot buffer zone to the BVW, right up to the wetland line in some cases.
- There is also a significant amount of fill proposed, some of which is proposed directly adjacent to the wetlands.
- It appears some of the stormwater comments from the peer reviewer were not addressed in the most recent information from the applicant:
 - O&M Plan does not include a budget, though the most recent response to the peer review does note that one will be provided to the DPW Superintendent for his review and approval.
 - Insulating sewer mains per MassDEP’s “Guideline for the Design, Construction, Operation, and Maintenance of Small Wastewater Treatment Facilities with Land Disposal”, Section IX Design Criteria, page 51.
 - Solid concrete sump in the forebays are not recommended. Water would pond at the bottom of the sump and created a mosquito breeding ground. A sediment forebay is intended to exfiltrated and flow through the earth berm/spillway to the basin and expected to draw down within 72 hours. Hence the 2-foot seasonal high ground water separation as required by Mass Stormwater Handbook.
- Minimizing disturbance to existing trees and shrubs is included by the applicant in their stormwater report checklist for low impact development measures, despite the fact that a large portion of the buffer zone is proposed to be cleared.
- The stormwater report does not appear to include a Long-Term Pollution Prevention Plan (Standard 4).
- The revised exhibit plan shows the following:
 - Highlights areas to be cleared within 15 feet of the wetland line
 - Total square footage for entire project: 6,222 square feet of buffer zone between 0 and 15 feet of the wetland line
 - Proposes 7,614 square feet of additional wetland to be added while preserving mature trees
 - Added a note regarding lots 5-7 and a 100-foot setback line from the property line on the southern portion of the plan.
- The revised plan set does not include the wetland mitigation areas as shown on the exhibit plans. There are also no cross-sections of the wetland mitigation areas.
- It is the applicant’s responsibility to show that a proposed project is designed to protect the wetlands’ ability to provide the above ecosystem functions. The applicant has not shown thus far that the project will protect the values and interests of the wetlands on the property.
 - The Commission could request a letter from the applicant outlining the ways in which this scale of project in close proximity to a bordering vegetated wetland will not impact the values and interests of the resource area.

RECOMMENDATION

- If the Commission would like to see the outstanding stormwater items addressed and the wetland replication area with appropriate cross-sectional information included on the plan set, I recommend asking the applicant if they would like to request a continuance to revise the plans to include that information as previously discussed.

Staff Report

Date: December 18, 2020

To: Conservation Commission

From: Whitney McClees, Conservation Agent

Subject: **North Street, Map 15 Lot 43 – Notice of Intent – DEP# 023-1341, Fairhaven
CON 023-194**

DOCUMENTS REVIEWED

- Notice of Intent and associated documents
- 310 CMR 10.00
- Fairhaven Wetlands Bylaw (Chapter 192)

RESOURCE AREAS ON/NEAR SITE

- Salt Marsh
- Coastal Beach
- Buffer Zone
- Land Subject to Coastal Storm Flowage

PERFORMANCE STANDARDS

- **Salt Marsh:** 10.32
(3) A proposed project in a salt marsh, on lands within 100 feet of a salt marsh, or in a body of water adjacent to a salt marsh shall not destroy any portion of the salt marsh and shall not have an adverse effect on the productivity of the salt marsh. Alterations in growth, distribution and composition of salt marsh vegetation shall be considered in evaluating adverse effects of productivity.
(4) A small project within a saltmarsh, such as an elevated walkway or other structure which has no adverse effects other than blocking sunlight from the underlying vegetation for a portion of each day may be permitted if such a project complies with all other applicable requirements of [the regulations for coastal wetlands].
- **Coastal Beach:** 10.27
(3) Any project on a coastal beach...shall not have an adverse effect by increasing erosion, decreasing the volume or changing the form of any such coastal beach or an adjacent or downdrift coastal beach.
(5) Beach nourishment with clean sediment of a grain size compatible with that on the existing beach may be permitted.
- **Buffer Zone General Provisions:** 10.53(1) "For work in the Buffer Zone subject to review under 310 CMR 10.02(2)(b)3., the Issuing Authority shall impose conditions to protect the interests of the Act identified for the adjacent Resource Area. ... where prior development is extensive, may consider measures such as the restoration of natural vegetation adjacent to a Resource Area to protect the interest of [the Act]. ... The purpose of preconstruction review of work in the Buffer

Zone is to ensure that adjacent Resource Areas are not adversely affected during or after completion of the work.”

- **LSCSF General Provisions:** 10.24(1) “If the issuing authority determines that a resource area is significant to an interest identified in [the Act]...,the issuing authority shall impose such conditions as are necessary to contribute to the protection of such interests.”

PROJECT SUMMARY

- The applicant proposes to install a six-foot fence along two sides of the property, a portion of chain link and a portion of vinyl. They applicant also proposes to install a gate across a portion of the property along Cherry Street.

COMMENTS

- The plans include riverfront area, but this property is south of the designated mouth of the Acushnet River. Therefore, there is no riverfront area on the property.
- The performance standards apply to the salt marsh as well as the 100-foot buffer zone.
- Salt marshes will migrate landward as sea levels rise, therefore reducing and/or eliminating vertical barriers in the buffer zone will allow for successful salt marsh migration corridors that will not cause an adverse effect on productivity.
- The plans aren’t entirely clear which sections are chain link and which sections are vinyl. Based on the current notation, it appears the only proposed vinyl fence is along the rear of Lot 48A and the rest of the proposed fence for the property is chain link.
 - *Question for Applicant:* Can you confirm that this is correct?
- Portions of the fence along Cherry Street fall within the AE flood zone. The full extent of the flood zone is not depicted on the site plan, specifically across Lots 48, and 48A.
- The project proposes a gate along Cherry Street across from Cooke Street. There is no detail for the gate on the plan. However, it does fall outside of the 100-foot buffer zone to the salt marsh and does not fall within the flood zone as the flood zone currently stands.
- Several abutters have expressed concern over the installation of a fence directly across existing driveways and behind existing fences.
- The Wetlands Protection Act Regulations state that “an Order of Conditions does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of property rights.” (310 CMR 10.05(6)(i))
- Many sections of the fence and associated erosion control barrier appear to be through areas of dense vegetation. A note on the plan states that the equipment to be used shall be limited to hand tools, mechanical auger, and a bobcat in the areas where the available space allows the use of this equipment.
 - *Question for Applicant:* What is the proposed access for the various portions of the work?
 - *Question for Applicant:* Where on the property is there space to get a bobcat in to do the work?
 - *Question for Applicant:* How much vegetation is proposed to be removed?
- The Commission should consider in areas that have dense vegetation whether that vegetation is serving as a fence already and if removing that vegetation to install a chain link fence would negatively impact the salt marsh either by removing buffer vegetation or restricting the ability of the salt marsh to migrate inland in the future.
- The removal of that vegetation could also impact flood control and storm damage prevention.

- There are two notes on the plan to remove items. One appears to refer to a yard waste pile. The other appears to refer to a tree on the corner of Lot 48A and North Street.
 - *Question for Applicant:* What is the purpose of removing the tree?
- Given the history of non-compliance by the applicant on other open Order of Conditions, the Commission could consider requiring a security under the bylaw.
 - §192-9(A). As part of a permit issued under this chapter...the Conservation Commission may require that the performance and observance of any conditions imposed hereunder be secured wholly or in part...by a proper bond or deposit or money or negotiable securities or other undertaking of financial responsibility in an amount sufficient in the opinion of the Commission.

RECOMMENDATION

- I cannot provide a recommendation until I have more information related to the questions outlined above.