

Staff Report

Date: October 28, 2019

To: Conservation Commission

From: Whitney McClees, Conservation Agent

Subject: **56 Goulart Memorial Drive – Certificate of Compliance – DEP# 023-1170, Fairhaven CON 023-101**

DOCUMENTS REVIEWED

- Order of Conditions issued in 2013
- Amended Order of Conditions issued in 2016
- 310 CMR 10.00
- Fairhaven Wetlands Bylaw (Chapter 192)

RESOURCE AREAS ON/NEAR SITE

- Salt Marsh (310 CMR 10.32)
 - *Significance:* Salt marshes are significant to prevention of pollution, to protection of marine fisheries, wildlife habitat, and, where there are shellfish, to protection of land containing shellfish. Salt marshes are likely to be significant to storm damage prevention and groundwater supply.

Salt marshes provide the basis for a large food web that supports many marine organisms, including finfish and shellfish as well as many bird species. Salt marshes also provide a spawning and nursery habitat for several important estuarine forage finfish as well as important food, shelter, breeding areas, and migratory and overwintering areas for many wildlife species.

Salt marsh plants and substrate remove pollutants from surrounding waters. Sediments also absorb chlorinated hydrocarbons and heavy metals such as lead, copper, and iron. The marsh also retains nitrogen and phosphorus compounds, which in large amounts can lead to algal blooms in coastal waters.

The underlying peat also serves as a barrier between fresh groundwater landward of the salt marsh and the ocean, thus helping maintain the level of such groundwater. Salt marsh cord grass and underlying peat are resistant to erosion and dissipate wave energy, thereby providing a buffer that reduces wave damage.

When a salt marsh is significant to one or more of the interests specified above, the following characteristics are critical to the protection of such interests:

the growth, composition, and distribution of salt marsh vegetation (*interests:* protection of marine fisheries and wildlife habitat, prevention of pollution, storm damage prevention);

the flow and level of tidal and fresh water (*interests:* protection of marine fisheries and wildlife habitat, prevention of pollution); and

the presence and depth of peat (*interests*: groundwater supply, prevention of pollution, storm damage prevention).

- Coastal Beach (310 CMR 10.27)

- *Significance*: Coastal beaches, which are defined to include tidal flats, are significant to storm damage prevention, flood control, and the protection of wildlife habitat. In addition, tidal flats are likely to be significant to the protection of marine fisheries and, where there are shellfish, land containing shellfish.

Coastal beaches dissipate wave energy by their gentle slope, their permeability, and their granular nature, which permit changes in beach form in response to changes in wave conditions.

Coastal beaches serve as a sediment source for dunes, subtidal areas, and any coastal areas downdrift from any point on the beach. Steep storm waves cause beach sediment to move offshore, resulting in a gentler beach slope and greater energy dissipation. Less steep waves cause an onshore return of beach sediment, where it will be available to provide protection against future storm waves.

Coastal beaches serve the purposes of storm damage prevention and flood control by dissipating wave energy, by reducing the height of storm waves and by providing sediment to supply other coastal features, including coastal dunes, land under the ocean, and other coastal beaches.

A number of birds also nest in the coastal berm, between the toe of a dune and the high tide line. In addition, isolated coastal beaches on small islands are important as haul out areas for harbor seals.

Tidal flats are likely to be significant to the protection of marine fisheries and wildlife habitat because they provide habitats for marine organisms such as polychaete worms and mollusks, which in turn are food sources for fisheries and migratory and wintering birds. Coastal beaches are extremely important in recycling of nutrients derived from storm drift and tidal action.

When coastal beaches are determined to be significant to storm damage prevention or flood control, the following characteristics are critical to the protection of those interests: volume (quantity of sediments) and form, and the ability to respond to wave action.

When coastal beaches are significant to the protection of marine fisheries or wildlife habitat, the following characteristics are critical to the protection of those interests: distribution of sediment grain size, water circulation, water quality, and relief and elevation.

- Land Under the Ocean (310 CMR 10.25)

- *Significance*: Land under the ocean is likely to be significant to the protection of marine fisheries and, where there are shellfish, to protection of land containing shellfish. Nearshore areas of land under the ocean are likely to be significant to storm damage prevention, flood control, and protection of wildlife habitat.

Land under ocean provides feeding areas, spawning and nursery grounds, and shelter for many coastal organisms related to marine fisheries. Nearshore areas of land under the ocean help reduce storm damage and flooding by diminishing and buffering the

high-energy effects of storms. Submerged bars dissipate storm wave energy. Such areas provide a source of sediment for seasonal rebuilding of coastal beaches and dunes. Nearshore areas of land under ocean also provide important food for birds.

When nearshore areas of land under the ocean are significant to storm damage prevention or flood control, the bottom topography of such land is critical to the protection of those interests.

When nearshore areas or other land under the ocean is significant to the protection of marine fisheries or wildlife habitat, the following factors are critical to the protection of such interests: water circulation, distribution of sediment grain size, water quality, finfish habitat, and important food for wildlife.

- Land Subject to Coastal Storm Flowage (LSCSF) Zone VE
 - *Significance:* Land subject to coastal storm flowage is likely to be significant to flood control and storm damage prevention. LSCSF can slow down flood waters and allow them to flow across a natural landform surface, providing frictional resistance and reducing their energy and destruction potential. It can allow flood waters to spread over a wide area without obstructions. Obstructions can cause the channelization of flood waters and storm-wave overwash and an increase in the velocity and volume of flow to adjacent or landward areas. LSCSF can also allow flood waters to be detained, absorbed into the ground, or evaporated into the atmosphere. LSCSF also protects the land from storm erosion by providing a substrate for vegetation that helps to stabilize sediments and slow down flood waters.

Where LSCSF overlaps other coastal resource areas, it plays an important role in determining the delineation and function of these resource areas, specifically coastal beaches and dunes, barrier beaches, and coastal banks.

Particular physical characteristics of LSCSF that are critical to the protection of the flood control and storm damage prevention interests include: topography, slope, surface area, soil characteristics (i.e., composition, size, shape, and density of material), vegetation, erodability, and permeability of sediments. Topography, slope, and permeability are critical for determining how effective an area is in dissipating wave energy, absorbing flood waters, and protecting areas within and landward of these zones from storm damage and flooding.

PROJECT SUMMARY

- The Order of Conditions and Amended Order of Conditions were issued for the authorization of existing and proposed structures, dredging and disposal area, and the repair and replacement of a concrete patio area.

COMMENTS

- According to the Harbormaster, the shellfish mitigation was never completed. The area was surveyed but no fee was ever paid.
 - Based on our current fee schedule, the shellfish mitigation fee will be dependent on how much area was disturbed.
- *Questions for Applicant:*
 - Was wave attenuation device placed in the water with a minimum separation between the base of the device and the substrate of 2.5 feet?

- Was the berm constructed to manage stormwater?
- Was the stormceptor installed?
- Some dredging was done, but how much and where was the material placed?

RECOMMENDATION

- In order to determine whether the work was done in compliance with the Order of Conditions, an as-built will need to be submitted.

Staff Report

Date: October 24, 2019
To: Conservation Commission
From: Whitney McClees, Conservation Agent
Subject: **200 Mill Road – Notice of Intent – DEP#023-1286, Fairhaven CON-19-029**

DOCUMENTS REVIEWED

- Notice of Intent and associated attachments submitted
- Updated plan submitted 8/6/2019
- 310 CMR 10.00
- Fairhaven Wetlands Bylaw (Chapter 192)

RESOURCE AREAS ON/NEAR SITE

- Bordering Vegetated Wetland (310 CMR 10.55)
 - *Significance:* Bordering vegetated wetlands are likely to be significant to public or private water supply, to groundwater supply, to flood control, to storm damage prevention, to prevention of pollution, and to wildlife habitat. Plants and soils of bordering vegetated wetlands remove or detain sediments, nutrients, and toxic substances that occur in run-off and flood waters.

The vegetation in bordering vegetated wetlands acts to slow down and reduce the passage of flood waters during periods of peak flows by providing temporary flood water storage and by facilitating water removal through evaporation and transpiration. This process reduces downstream flood crests and the resulting damage to private and public property. During dry periods, the water retained in bordering vegetated wetlands is essential to the maintenance of base flow levels in rivers and streams, which is important to the protection of water quality and water supplies.

Wetland vegetation provides shade which moderates water temperatures important to fish life. Wetlands flooded by adjacent water bodies and waterways provide food, breeding habitat, and cover for fish.

Bordering vegetated wetlands are probably the Commonwealth's most important inland habitat for wildlife. The hydrologic regime, plant community composition and structure, topography, and water chemistry of bordering vegetated wetlands provide important food, shelter, migratory and overwintering areas, and breeding and nesting areas for many birds, mammals, amphibians, reptiles, and insects.

- Riverfront Area
 - Project not proposed to occur within Riverfront area

PROJECT SUMMARY

- The Notice of Intent was filed for the construction of a 72-space parking expansion within the 100-foot buffer zone to a Bordering Vegetated Wetland.
- The Applicant has proposed a stormwater easement to utilize a stormwater facility on a neighboring property to manage the stormwater from the proposed parking expansion.
- The updated plans have reduced the parking from a 72-space lot to a 68-space lot.

COMMENTS

- Given the existing significant area of impervious surface on the property and that much of the buffer zone and Riverfront Area on the property is already impervious, adding to that square footage may have detrimental impacts on the wetland, which is part of a larger system of Riverfront Area (Nasketucket River) and other Bordering Vegetated Wetlands.
- 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.”
- 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.”
- The Stormwater Management Report still needs peer review.
- The engineer has communicated that they are still waiting to receive the peer review fee from the applicant so they can submit all of the updated documents for peer review.

RECOMMENDATION

- The applicant nor their representative has requested a continuance nor have they provided updated plans and documents, so I am unable to provide a recommendation at this time.

Staff Report

Date: October 24, 2019
To: Conservation Commission
From: Whitney McClees, Conservation Agent
Subject: **46 Sconticut Neck Road – Notice of Intent – DEP#023-1296,
Fairhaven CON-19-050**

DOCUMENTS REVIEWED

- Notice of Intent and associated attachments submitted
- Revised plans dated September 18, 2019
- Revised mitigation plan dated August 10, 2019
- 310 CMR 10.00
- Fairhaven Wetlands Bylaw
- Stormwater Management Plan Review by GCG Associates, Inc. dated June 25, 2019
- Second review by GCG Associates, Inc. dated August 26, 2019
- Third review by GCG Associates, Inc. dated October 2, 2019

RESOURCE AREAS PRESENT

- Bordering Vegetated Wetland (310 CMR 10.55)
 - *Significance:* Bordering vegetated wetlands are likely to be significant to public or private water supply, to groundwater supply, to flood control, to storm damage prevention, to prevention of pollution, and to wildlife habitat. Plants and soils of bordering vegetated wetlands remove or detain sediments, nutrients, and toxic substances that occur in run-off and flood waters.

The vegetation in bordering vegetated wetlands acts to slow down and reduce the passage of flood waters during periods of peak flows by providing temporary flood water storage and by facilitating water removal through evaporation and transpiration. This process reduces downstream flood crests and the resulting damage to private and public property. During dry periods, the water retained in bordering vegetated wetlands is essential to the maintenance of base flow levels in rivers and streams, which is important to the protection of water quality and water supplies.

Wetland vegetation provides shade which moderates water temperatures important to fish life. Wetlands flooded by adjacent water bodies and waterways provide food, breeding habitat, and cover for fish.

Bordering vegetated wetlands are probably the Commonwealth's most important inland habitat for wildlife. The hydrologic regime, plant community composition and structure, topography, and water chemistry of bordering vegetated wetlands provide important food, shelter, migratory and overwintering areas, and breeding and nesting areas for many birds, mammals, amphibians, reptiles, and insects.

- Other resource areas on the property include: Salt Marsh, Priority and Estimated Habitat for Rare and Endangered Species (associated with the Salt Marsh), Land Subject to Coastal Storm Flowage.
 - There is no work proposed in or with 100 feet of these areas.

PROJECT SUMMARY

- The Notice of Intent was filed for the construction of an 8-house subdivision, roadway, stormwater facility, and utilities and for wetland mitigation of historical impacts.
- The proposed construction is located in the most western portion of the property and will be located on approximately 2.3 acres of predominantly disturbed land or old field habitat. An additional impact to natural wood land will impact approximately 2,500 square feet (0.06 acres). The remainder of the property, approximately 25 acres, will remain undisturbed.
- The Fairhaven Conservation Commission issued an Order of Resource Area Delineation (ORAD) on April 4, 2019 confirming the wetland delineation on the property (DEP File # SE 023-1284).
- A historic wetland impact area was identified by MassGIS 2005 Human Altered Areas database. The entire area accounts for 24,751 square feet.
- To mitigate for the historic impact, the project proposes to construct a 16,728 square foot deciduous forested swamp located in the southeast portion of the property.

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.”
- Per 314 CMR 9.04(3), the applicant will need to obtain a 401 water quality certification or record a deed restriction providing notice to subsequent purchasers limiting the amount of fill for the single and complete project to less than 5000 square feet cumulatively of bordering and/or

isolated vegetated wetlands and land under water and the discharge is not to an Outstanding Resource Water.

- Applicant will also likely need to submit something to US Army Corps of Engineers under Section 404 (Federal Clean Water Act)
- The revisions to the Wetland Mitigation have addressed my comments.
- The second peer review by GCG noted several comments had been resolved and others needed more information to be considered resolved.
- The Engineer provided their responses to the peer reviewer second round of comments.
- The peer reviewer noted that further design change will be needed and has recommended that the applicant request a continuance.

RECOMMENDATION

- I have not yet received updated plans and documents in response to the peer reviewer's most recent comments nor have I received a request for a continuance, so I am unable to make a recommendation at this time.

Staff Report

Date: October 24, 2019

To: Conservation Commission

From: Whitney McClees, Conservation Agent

Subject: **Bridge Street, Map 36, Lot 15 – Notice of Intent – DEP# 023-1299,
Fairhaven CON 023-081**

DOCUMENTS REVIEWED

- Notice of Intent and associated documents
- 310 CMR 10.00
- Fairhaven Wetlands Bylaw (Chapter 192)
- Delineating Bordering Vegetated Wetlands Under the Massachusetts Wetlands Protection Act
- Existing Conditions plan (Sheet 2), revised October 5, 2019.
- Peer Review Letter from Environmental Consulting & Restoration, LLC dated October 10, 2019

RESOURCE AREAS ON/NEAR SITE

- Bordering Vegetated Wetland (310 CMR 10.55)
 - *Significance:* Bordering vegetated wetlands are likely to be significant to public or private water supply, to groundwater supply, to flood control, to storm damage prevention, to prevention of pollution, and to wildlife habitat. Plants and soils of bordering vegetated wetlands remove or detain sediments, nutrients, and toxic substances that occur in run-off and flood waters.

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Wetland vegetation provides shade which moderates water temperatures important to fish life. Wetlands flooded by adjacent water bodies and waterways provide food, breeding habitat, and cover for fish.

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PROJECT SUMMARY

- Proposed construction of an auto dealership with ancillary paved parking in Bordering Vegetated Wetland. Replication proposed.

COMMENTS

- The wetland line approval has lapsed. This was originally filed in April and then withdrawn after I indicated that the line was not accurate and would need to be redelineated.
- This new filing uses the same wetland line as the April filing. In May, large areas outside of the wetland line contained hydric soils. I assessed the soils and vegetation well outside of the line in July and again found hydric soils and wetland vegetation. The USDA soil maps of the area label the soils as hydric as well.
- The property has been consistently mowed, including inside the old wetland line, for the last several years. Per the MassDEP handbook, Delineating Bordering Vegetated Wetlands Under the Massachusetts Wetlands Protection Act, any one of the three indicators is sufficient to determine that the sample location is in a BVW if the site has been disturbed.
- I requested peer reviewer proposals from the following people: John Rockwell, Magdalena Lofstedt, Brad Holmes (Environmental Consulting & Restoration, LLC), Brooke Monroe (Pinebrook Consulting), and Natural Resource Services, Inc.
- John Rockwell is unable to conduct the peer review due to conflict of interest.
- Brad Holmes from ECR, Natural Resource Services, Inc., and Magdalena Lofstedt submitted proposals for the review of the NOI and delineation.
- I did not receive a proposal from Brooke Monroe, Pinebrook Consulting.
- Brad Holmes will be doing the peer review.
- Brad Holmes conducted a field assessment of the line on October 2, 2019 and observed the following:
 - The current conditions of the site allow for a good review of the herbaceous vegetation and soils. I am not in agreement with the majority of the past delineations as shown on the site plan. The western portion of the site consists of a large wet meadow BVW system. The eastern portion of the site is mainly upland with a small section of BVW along the eastern boundary. Brandon was in agreement with me that the majority of the past delineations do not match current conditions. We reflagged the site together and are in agreement with the flags locating the landward limits of BVW.
- The engineer provided a revised Existing Conditions plan dated October 5, 2019. The remainder of the plans have not yet been updated to incorporate this new wetland line.
- Brad Holmes provided a peer review letter, dated October 10, 2019, that noted the following:
 - The October 2nd site review was performed with Brandon Faneuf, PWS of Ecosystems Solutions, Inc.
 - The site review was intended to review existing conditions with a concentration of the delineation of the Bordering Vegetated Wetlands (BVW) following the criteria established by the Massachusetts Department of Environmental Protection (MassDEP).
 - After review of the site and staked wetland delineations, ECR was not in agreement with the delineations designating the landward limit of BVW. The vegetation and soil conditions were not matching conditions as shown on the site plan. More specifically, ECR found the following:
 - The western portion of the site to the west of the intermittent stream/drainage ditch consists mainly as wet meadow BVW. Meantime the vegetation is dominated with wetland species and hydric soils. There is minor

evidence of hydrology within this area such as water staining. ECR and Ecosystem Solutions, Inc. reflagged this wetland line along the western portion of the site, which is significantly different than previously shown. This delineation is shown on the revised NOI plan.

- The eastern portion of the site to the east of the access driveway consists mainly as upland meadow. The stakes areas indicating wetland areas from past delineations does not match wetland conditions. ECR found the majority of this area to consist of uplands. A small portion of this area does contain a wet meadow BVW that is supported by drainage runoff by the nearby parking lot. This BVW also connects to the Route 240 drainage/wetland system. ECR and Ecosystem Solutions, Inc. reflagged this wetland line along the eastern portion of the site, which is significantly different than previously shown. This delineation is shown on the revised NOI plan.
- As a result of the site review, the limit of the BVW was revised and the revised delineation has been surveyed and is shown on the updated Existing Conditions plan dated October 5, 2019.
- As a result of our site review and revised delineation on October 2nd, the limit of the BVW is accurately delineated in the field in compliance with the MassDEP regulations found at 310 CMR 10.55 pertaining to the delineation of BVWs and its associated “Manual”, titled Delineating Bordering Vegetated Wetlands Under the Massachusetts Wetlands Protection Act, A Handbook, March 1995.
- The remaining areas of the site upgradient, or landward, of the BVW line contain upland area.
- The revised Existing Conditions Plan accurately indicates the delineation from the October 2nd field event with two minor exceptions, which are:
 - Connect the BVW line from #Y19 to #A30
 - Wetland Flag #Z11 appears to be in the wrong direction. #Z11 should angle back towards the east.
- This site is currently managed as an upland meadow and wetland meadow.
- Overall, the site contains a majority of native herbaceous wetland and upland plant species. Some non-native invasive vegetation exists within the wetlands such as Purple Loosestrife (*Lythrum salicaria*).
- ECR is able to confirm that the site contains the following wetland resource areas and areas of Conservation Commission jurisdiction:
 - Bordering Vegetated Wetland (BVW) as delineated and described above
 - 100-foot buffer zone to BVW
- This site does contain a USGS mapped intermittent stream. This mapped stream is located within the existing draining ditch located in the western portion of the site. The streambed was dry during the October 2nd site review. This stream is confirmed as intermittent via the Massachusetts StreamStats program since it has a watershed area of less than 0.5 square miles (calculated at 0.16 square miles).
- Once all of the plans and documents have been updated to reflect the revised wetland line and any changes that need to be made, the stormwater report will need to be peer reviewed.

RECOMMENDATION

- I have not yet received updated plans and documents to provide to a stormwater peer reviewer for a proposal nor have I received a request for a continuance, so I am unable to make a proposal at this time.

Staff Report

Date: October 24, 2019

To: Conservation Commission

From: Whitney McClees, Conservation Agent

Subject: **Huttleston Ave, Map 31, Lots 115A & 117C – Notice of Intent – DEP# 023-1308, Fairhaven CON 023-095**

DOCUMENTS REVIEWED

- Notice of Intent and associated documents
- 310 CMR 10.00
- Fairhaven Wetlands Bylaw (Chapter 192)
- Peer Review Letter from GCG Associates, Inc. dated October 11, 2019

RESOURCE AREAS ON/NEAR SITE

- Bordering Vegetated Wetlands (310 CMR 10.55)
 - *Significance:* Bordering vegetated wetlands are likely to be significant to public or private water supply, to groundwater supply, to flood control, to storm damage prevention, to prevention of pollution, and to wildlife habitat. Plants and soils of bordering vegetated wetlands remove or detain sediments, nutrients, and toxic substances that occur in run-off and flood waters.

The vegetation in bordering vegetated wetlands acts to slow down and reduce the passage of flood waters during periods of peak flows by providing temporary flood water storage and by facilitating water removal through evaporation and transpiration. This process reduces downstream flood crests and the resulting damage to private and public property. During dry periods, the water retained in bordering vegetated wetlands is essential to the maintenance of base flow levels in rivers and streams, which is important to the protection of water quality and water supplies.

Wetland vegetation provides shade which moderates water temperatures important to fish life. Wetlands flooded by adjacent water bodies and waterways provide food, breeding habitat, and cover for fish.

Bordering vegetated wetlands are probably the Commonwealth's most important inland habitat for wildlife. The hydrologic regime, plant community composition and structure, topography, and water chemistry of bordering vegetated wetlands provide important food, shelter, migratory and overwintering areas, and breeding and nesting areas for many birds, mammals, amphibians, reptiles, and insects.

PROJECT SUMMARY

- It is proposed to construct four, two-story wood-framed three-unit residential buildings for a total of 12 residential 2-bedroom units. In addition, two ancillary storage buildings will be constructed and will be available as storage rental space for the apartment tenants as 12-foot-wide by 20-foot-deep areas with garage door access. There is also proposed to be a small maintenance building. A total of 26 standard parking spaces and 2 van-accessible spaces are proposed.
- The storm drainage system at the proposed development has been designed to create a reduction in the rate of stormwater runoff from the existing site. The collection and treatment systems will be in the form of deep sump catch basins, sediment forebays, and a detention basin. Hydrologic computations were performed in order to model the volume and rate of flow of stormwater from the site, under both existing and proposed conditions, for a broad range of design storms.

COMMENTS

- There is a current Order of Conditions (SE 023-1245) for these lots which expires March 6, 2020.
- This current OOC approved vegetation clearing up to 25 feet off the wetland line and identifies the resource area as a Bordering Vegetated Wetland.
- The submitted plans identify the resource area as Jurisdictional Isolated Land Subject to Flooding, which is incorrect based on SE 023-1245.
- *Question for Applicant:* Given the previous filing maintained a 25-foot setback to the wetland line, what would the feasibility be of doing the same here?
- The proposed landscaping vegetation is mostly native species with the following exceptions:
 - Japanese Zelkova (*Zelkova serrata*)
 - Green Velvet Boxwood (*Buxus sempervirens*)
 - Dwarf Japanese Juniper (*Juniper procumbens* 'Nana')
- The proposed detention basin also contains some non-native plants.
- *Question for Applicant:* What is the feasibility of using native vegetation for the project?
- Currently, the erosion and sedimentation control is a combination of haybale and silt fence. I would prefer to see no hay being used on site given it has a tendency to introduce invasive species. Additionally, there should be some sort of erosion control on the upgradient side of the silt fence. Ideally, I would like to see a straw wattle or coir fiber log or roll used for erosion control on the upgradient side.
- There is a schematic for a rain garden noted on sheet 6 but I don't see a location for the rain garden noted on the plans.
- The peer reviewer provided comments on the current stormwater design and noted that changes need to be made to be in compliance with both Conservation and Planning regulations.

RECOMMENDATION

- I have not yet received updated plans and documents nor have I received a request for a continuance, so I am unable to make a recommendation at this time.

Staff Report

Date: October 24, 2019

To: Conservation Commission

From: Whitney McClees, Conservation Agent

Subject: **115 Weeden Road – Request for Determination of Applicability – No DEP#, Fairhaven CON 023-097**

DOCUMENTS REVIEWED

- Request for Determination of Applicability and associated documents
- 310 CMR 10.00
- Fairhaven Wetlands Bylaw (Chapter 192)

RESOURCE AREAS ON/NEAR SITE

- There is a pond nearby, but there do not appear to be any resource areas on the property according to online mapping.

PROJECT SUMMARY

- The applicants are requesting that the Conservation Commission make a determination as to whether their property is an area subject to jurisdiction under the Wetlands Protection Act and the Fairhaven Wetlands Bylaw. No work is proposed.
 - “On the side of our home facing Weeden Road, it was alleged that approximately a quarter of our property may have been Wetlands/Conservation land. Prior to purchasing our home, the prior seller had to ensure a Certificate of Compliance was adhered to. To ensure this was done, Daniel Gilmore from the MassDEP came to the home prior to us purchasing it along with Richard Charon from Charon Assoc. Myself, the prior homeowner, and our Realtor Athena was present. We were advised that it didn’t appear that this part of the property was wetlands.”

COMMENTS

- Due to the existence of an Order of Conditions/Certificate of Compliance on the property, the homeowner reached out to me to ask if they would need to file with the Conservation Commission to do some work on the property. I looked at the online maps and didn’t see anything obvious, so the Circuit Rider and I conducted a site visit on September 9 and determined the following:
 - Though there is some wetland vegetation at the property, the soil characteristics do not indicate hydric/wetland soils. We did not observe a perennial stream nor did we observe indicators of an intermittent stream and none are noted on the USGS Quad.

Therefore, it was the opinion of both the Circuit Rider and myself that there is not a wetland on the property.

- However, due to a previous Superseding Order of Conditions and Certificate of Compliance through MassDEP, it is my recommendation that you file a Request for Determination of Applicability to have the Conservation Commission officially determine that your property is not jurisdictional.

RECOMMENDATION

- If the Commission accepts the assessment of the property made by myself and the two individuals from MassDEP, I recommend closing the public hearing and issuing a Negative 1 and Negative 6 Determination.

Staff Report

Date: October 24, 2019

To: Conservation Commission

From: Whitney McClees, Conservation Agent

Subject: **20 Adams Street – Request for Determination of Applicability – No DEP#, Fairhaven CON 023-098**

DOCUMENTS REVIEWED

- Request for Determination of Applicability and associated documents
- 310 CMR 10.00
- Fairhaven Wetlands Bylaw (Chapter 192)

RESOURCE AREAS ON/NEAR SITE

- Land Subject to Coastal Storm Flowage (LSCSF) Zone AE
 - *Significance:* Land subject to coastal storm flowage is likely to be significant to flood control and storm damage prevention. LSCSF can slow down flood waters and allow them to flow across a natural landform surface, providing frictional resistance and reducing their energy and destruction potential. It can allow flood waters to spread over a wide area without obstructions. Obstructions can cause the channelization of flood waters and storm-wave overwash and an increase in the velocity and volume of flow to adjacent or landward areas. LSCSF can also allow flood waters to be detained, absorbed into the ground, or evaporated into the atmosphere. LSCSF also protects the land from storm erosion by providing a substrate for vegetation that helps to stabilize sediments and slow down flood waters.

Where LSCSF overlaps other coastal resource areas, it plays an important role in determining the delineation and function of these resource areas, specifically coastal beaches and dunes, barrier beaches, and coastal banks.

Particular physical characteristics of LSCSF that are critical to the protection of the flood control and storm damage prevention interests include: topography, slope, surface area, soil characteristics (i.e., composition, size, shape, and density of material), vegetation, erodability, and permeability of sediments. Topography, slope, and permeability are critical for determining how effective an area is in dissipating wave energy, absorbing flood waters, and protecting areas within and landward of these zones from storm damage and flooding.

PROJECT SUMMARY

- The applicant is proposing to install a 1-2 car driveway to the left of the existing single family home.

COMMENTS

- Only a small portion of the eastern edge of the property along Adams Street falls within the flood zone. The majority of the driveway would be outside of the jurisdiction of the Wetlands Protection Act.
- The Fairhaven Wetlands Bylaw assigns a 100-foot buffer zone to the flood zone, which does encompass the entire property.

RECOMMENDATION

- I recommend closing the public hearing and issuing a Negative 2 and Negative 6 Determination.

Staff Report

Date: October 24, 2019

To: Conservation Commission

From: Whitney McClees, Conservation Agent

Subject: **87 Balsam Street - Lot 140 – Request for Determination of Applicability – No DEP#, Fairhaven CON 023-099**

DOCUMENTS REVIEWED

- Request for Determination of Applicability and associated documents
- 310 CMR 10.00
- Fairhaven Wetlands Bylaw (Chapter 192)

RESOURCE AREAS ON/NEAR SITE

- Land Subject to Coastal Storm Flowage (LSCSF) Zone VE
 - *Significance:* Land subject to coastal storm flowage is likely to be significant to flood control and storm damage prevention. LSCSF can slow down flood waters and allow them to flow across a natural landform surface, providing frictional resistance and reducing their energy and destruction potential. It can allow flood waters to spread over a wide area without obstructions. Obstructions can cause the channelization of flood waters and storm-wave overwash and an increase in the velocity and volume of flow to adjacent or landward areas. LSCSF can also allow flood waters to be detained, absorbed into the ground, or evaporated into the atmosphere. LSCSF also protects the land from storm erosion by providing a substrate for vegetation that helps to stabilize sediments and slow down flood waters.

Where LSCSF overlaps other coastal resource areas, it plays an important role in determining the delineation and function of these resource areas, specifically coastal beaches and dunes, barrier beaches, and coastal banks.

Particular physical characteristics of LSCSF that are critical to the protection of the flood control and storm damage prevention interests include: topography, slope, surface area, soil characteristics (i.e., composition, size, shape, and density of material), vegetation, erodability, and permeability of sediments. Topography, slope, and permeability are critical for determining how effective an area is in dissipating wave energy, absorbing flood waters, and protecting areas within and landward of these zones from storm damage and flooding.

PROJECT SUMMARY

- The applicant is proposing to level the land on Lot 140 where there is a depression, add loam, and plant grass.

COMMENTS

- The area they would like to level is on the right side of the property and currently contains a depression with some phragmites visible.
- The property slopes down from the rear to the road, so it is unlikely that filling the depression would have a major impact on the path of stormwater. Additionally, they are not proposing to make the area impervious. Right now, there is very little vegetation, so adding something to help hold the soil together would be a benefit.

RECOMMENDATION

- I recommend closing the public hearing and issuing a Negative 2 and Negative 6 Determination with the condition that any fill be clean fill.

Staff Report

Date: October 24, 2019

To: Conservation Commission

From: Whitney McClees, Conservation Agent

Subject: **1 Stetson Avenue – Request for Determination of Applicability – No DEP#, Fairhaven CON 023-100**

DOCUMENTS REVIEWED

- Request for Determination of Applicability and associated documents
- 310 CMR 10.00
- Fairhaven Wetlands Bylaw (Chapter 192)
- Beach Nourishment: MassDEP's Guide to Best Management Practices for Projects in Massachusetts

RESOURCE AREAS ON/NEAR SITE

- Coastal Beach (310 CMR 10.27)
 - *Significance:* Coastal beaches, which are defined to include tidal flats, are significant to storm damage prevention, flood control, and the protection of wildlife habitat. In addition, tidal flats are likely to be significant to the protection of marine fisheries and, where there are shellfish, land containing shellfish.

Coastal beaches dissipate wave energy by their gentle slope, their permeability, and their granular nature, which permit changes in beach form in response to changes in wave conditions.

Coastal beaches serve as a sediment source for dunes, subtidal areas, and any coastal areas downdrift from any point on the beach. Steep storm waves cause beach sediment to move offshore, resulting in a gentler beach slope and greater energy dissipation. Less steep waves cause an onshore return of beach sediment, where it will be available to provide protection against future storm waves.

Coastal beaches serve the purposes of storm damage prevention and flood control by dissipating wave energy, by reducing the height of storm waves and by providing sediment to supply other coastal features, including coastal dunes, land under the ocean, and other coastal beaches.

A number of birds also nest in the coastal berm, between the toe of a dune and the high tide line. In addition, isolated coastal beaches on small islands are important as haul out areas for harbor seals.

Tidal flats are likely to be significant to the protection of marine fisheries and wildlife habitat because they provide habitats for marine organisms such as polychaete worms and mollusks, which in turn are food sources for fisheries and migratory and wintering

birds. Coastal beaches are extremely important in recycling of nutrients derived from storm drift and tidal action.

When coastal beaches are determined to be significant to storm damage prevention or flood control, the following characteristics are critical to the protection of those interests: volume (quantity of sediments) and form, and the ability to respond to wave action.

When coastal beaches are significant to the protection of marine fisheries or wildlife habitat, the following characteristics are critical to the protection of those interests: distribution of sediment grain size, water circulation, water quality, and relief and elevation.

- Coastal Dune (310 CMR 10.28)

- *Significance:* All coastal dunes are likely to be significant to storm damage prevention and flood control, and all coastal dunes on barrier beaches and the coastal dune closest to the coastal beach, in any area are significant to storm damage prevention and flood control. Coastal dunes are also often significant to the protection of wildlife habitat.

Coastal dunes aid in storm damage prevention and flood control by supplying sand to coastal beaches. Coastal dunes protect inland coastal areas from storm damage and flooding by storm waves and storm elevated sea levels because such dunes are higher than the coastal beaches which they border. In order to protect this function, coastal dune volume must be maintained while allowing coastal dune shape to conform to natural wind and water flow patterns.

On retreating shorelines, the ability of the coastal dunes bordering the coastal beach to move landward at the rate of shoreline retreat allows these dunes to maintain their form and volume, which in turn promotes their function of protecting against storm damage or flooding.

Dunes are also important nesting habitats and, in some cases, feeding areas for a number of bird species.

When a coastal dune is significant to storm damage prevention, flood control, or the protection of wildlife habitat, the following characteristics are critical to the protection of those interests: the ability of the dune to erode in response to coastal beach conditions; dune volume; dune form, which must be allowed to be changed by wind and natural water flow; vegetative cover; the ability of the dune to move landward or laterally; the ability of the dune to continue serving as bird nesting habitat.

- Land Subject to Coastal Storm Flowage (LSCSF) Zone VE

- *Significance:* Land subject to coastal storm flowage is likely to be significant to flood control and storm damage prevention. LSCSF can slow down flood waters and allow them to flow across a natural landform surface, providing frictional resistance and reducing their energy and destruction potential. It can allow flood waters to spread over a wide area without obstructions. Obstructions can cause the channelization of flood waters and storm-wave overwash and an increase in the velocity and volume of flow to adjacent or landward areas. LSCSF can also allow flood waters to be detained, absorbed into the ground, or evaporated into the atmosphere. LSCSF also protects the land from storm erosion by providing a substrate for vegetation that helps to stabilize sediments and slow down flood waters.

Where LSCSF overlaps other coastal resource areas, it plays an important role in determining the delineation and function of these resource areas, specifically coastal beaches and dunes, barrier beaches, and coastal banks.

Particular physical characteristics of LSCSF that are critical to the protection of the flood control and storm damage prevention interests include: topography, slope, surface area, soil characteristics (i.e., composition, size, shape, and density of material), vegetation, erodability, and permeability of sediments. Topography, slope, and permeability are critical for determining how effective an area is in dissipating wave energy, absorbing flood waters, and protecting areas within and landward of these zones from storm damage and flooding.

PROJECT SUMMARY

- The applicant proposes to replace an eroded area of the beach with appropriate sand material.
- The applicant notes that the work will be done by hand: wheelbarrowed from truck and shoveled in to fill the ditch.
- The ditch is about 20 feet long and about 1-3 feet deep. About 4 cubic yards of sand will be required.

COMMENTS

- According to the MassDEP Beach Nourishment Guide, “the most important factor for beach nourishment projects is the grain size distribution of the source material as compared to the native beach material, also referred to as sediment compatibility.”
- The placement of sand/sediment should match the existing slope of the beach.
- Monitoring is needed to ensure success of project, especially monitoring before and after storm seasons.
- It is the Conservation Commission’s responsibility to see that no project will alter the flow of water along the Beach and thereby interfere with sediment deposition, erosion or grain size of the Beach material.
- *Question for Applicant:* How do you intend to determine that the fill you’re bringing in is a match for the existing characteristics of the coastal beach?
- *Question for Applicant:* Where do you intend to source the fill that you’re bringing in?
- *Question for Applicant:* Do you have a plan for monitoring once the fill has been brought in?

RECOMMENDATION

- If Commission feels the project will not negatively impact the resource area, I recommend closing the public hearing and issuing a Negative 3 and Negative 6 Determination with the following conditions:
 - The source and details of the fill to be brought in shall be submitted to the Commission or its Agent for review and approval prior to beginning the project.
 - The applicant shall submit a plan for monitoring to the Commission or its Agent for review and approval prior to beginning the project.
 - The extent of the fill shall be only to match the existing slope of the beach, not greater than the existing slope.

Staff Report

Date: October 24, 2019

To: Conservation Commission

From: Whitney McClees, Conservation Agent

Subject: **Violations/Enforcement Orders/Cease and Desist Notices and General Business**

40 Wapatma Lane

- I performed a site visit with Brandon Faneuf on October 18 during which we walked the wetland line. I looked at the soils in a few places along the line and I am in agreement with the placement of the flags.
- During the site visit, we spoke with the property owner's grandson about moving the paddock 25 feet off the wetland line and removing the wire fencing from around the inactive paddock.
- There will be a forthcoming filing for the berm along the edge of the paddock where necessary near the wetland.

44 Torrington Road

- I received a report of a potential violation on October 8, 2019 of cutting of vegetation near and possibly within a wetland area.
- I conducted a site visit on October 8, 2019 and observed a large amount of vegetation cutting beyond the stone wall on the property. Additionally, I spoke to one of the property owners in person about the activity and she called the other property owner so I could speak to him. He indicated that based on the appeal of the flood zone on the neighboring properties, he was under the impression that it was all okay. I gave a verbal cease and desist to both property owners and Mr. Fournier confirmed that no further work would occur and that he hadn't intended to do anything untoward.
- According to the FEMA Flood Map, the area beyond the stone wall is within Land Subject to Coastal Storm Flowage Zone AE.
- Additionally, there is a Bordering Vegetated Wetland 23 feet west of the stone wall according to a currently Order of Conditions for the neighboring property.
- Based on where the trees are, it appears they have been felled into a Bordering Vegetated Wetland.
- I was not able to tell from the site visit whether or not the trees had been located in the buffer zone or in the wetland prior to their removal.
- I performed a second site visit on October 22, 2019 and noted the following:
 - 15 mature trees have been cut down, the stumps have not been removed
 - The trees appear to be black cherry but I'm not positive
 - I took a look at the soils around where some of the trees were cut and everything appears to be upland, though still flood zone.
 - The property owner indicated that he has hired someone to remove the trunks and branches and chip them.
 - I recommended that the wood chips not be spread on site and the property owner indicated that he would communicate that to his contractor.

3 North Street, North Street Layout West of Cherry Street, North Street Marsh

- Contained in separate report

Bills

- Environmental Consulting & Restoration, Inc. - \$1,937.50 for wetland peer review of 250 Bridge Street
- GCG Associates, Inc. - \$805.00 for stormwater peer review of 46 Scoticut Neck Road

Staff Report

Date: October 24, 2019

To: Conservation Commission

From: Whitney McClees, Conservation Agent

Subject: **Violations/Enforcement Orders/Cease and Desist Notices**

3 North Street and North Street Layout West of Cherry Street

- Geoff Haworth conducted a site visit following a report that work had been done outside of the limit of work for SE 023-1273. The findings were:
 - The area known to me as North Street has been graded and sod has been installed. The sod starts at the first wall at 3 North Street and continues to the drainage ditch on North Street west of Cherry Street outside the LOW.
 - Cease and desist notice issued for all activity at 14:30 hours on 10/9/2019 by me. This was issued for work outside the LOW in a resource area and violation of the current Order of Conditions.
- Enforcement Order was issued October 16, 2019 and needs to be ratified.
- The engineer called me discussing the laying of the sod and expressed that it was grass before. I indicated to the engineer that the grading was the issue rather than the grass.
- Based on a site visit from a member of the Commission, it appears that stone has been laid around the stormceptor on site and that the cease and desist notice has been removed.

North Street Marsh, Assessors Map 15, Lot 43

- I had a conversation with the property owner prior to the September 30, 2019 meeting informing him that if he didn't want to see any further work in the clearing behind Hedge Street that he could choose not to file for a permit. A permit was only necessary if he wanted that area to be maintained. I also discussed with him that the \$300 fine needs to be paid. He indicated that his attorney would be sending a letter to another party for payment of the fine and would be contacting me.
- Currently, I have not heard from the attorney nor have I received payment for the \$300 fine.
- I have not conducted a site visit since to determine whether or not the cease and desist notices are still posted.
- The Enforcement Order that was issued September 18, 2019 needs to be ratified.