Staff Report

Date: September 25, 2019

To: Conservation Commission

From: Whitney McClees, Conservation Agent

Subject: **277 Bridge Street – Field Change Request – DEP# 023-1246**

DOCUMENTS REVIEWED

- Notice of Intent
- Order of Conditions issued September 11, 2017
- Field Change Memo dated September 19, 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.

- Bank (310 CMR 10.54)
    - *Significance*: Banks are likely to be significant to public or private water supply, to groundwater supply, to flood control, to storm damage prevention, to the prevention of

pollution, and to the protection of fisheries and wildlife habitat. When banks are composed of concrete, asphalt, or other artificial impervious material, said banks are likely to be significant to flood control and storm damage prevention.

Banks are areas where groundwater discharges to the surface and where, under some circumstances, surface water recharges the groundwater. Where banks are partially or totally vegetated, the vegetation serves to maintain the banks' stability, which in turn protects water quality by reducing erosion and siltation.

Banks may also provide shade that moderates water temperatures, as well as providing breeding habitat, escape cover, and food, all of which are significant to the protection of fisheries. The topography, plant community composition and structure, and soil structure of banks together provide important food, shelter, migratory and overwintering areas, and breeding areas for wildlife.

Banks act to confine floodwaters during the most frequent storms, preventing the spread of water to adjacent land. Because banks confine water during such storms to an established channel, they maintain water temperature and depths necessary for the protection of fisheries.

An alteration of a bank that permits water to frequently and consistently spread over a large and more shallow area increases the amount of property which is routinely flooded, as well as elevating water temperature and reducing fish habitat within the main channel, particularly during warm weather.

PROJECT SUMMARY

- The applicant was permitted to construct a convenience store/gas station with associated parking and utilities.

COMMENTS

- The engineer has submitted a signed and stamped memo requesting to replace the approved stormwater units with alternate unites due to the contractor having difficulty obtaining a reasonable delivery date for the product.
- The project was originally approved to use Stormceptor 450i model units, which were evaluated as part of the stormwater peer review process.
- The engineer is proposing to replace the Stormceptor 450i model units with First Defense, Model FD-3HC units.
- The engineer's memo attached technical specifications, a comparison with the Stormceptor units, and noted:
    - "I have reviewed this data and I agree that this product is comparable to the Stormceptor 450i unit and is acceptable to SITEC for use on this project. I also note in reviewing the attached information that this product has been installed throughout Massachusetts, including the Town of Fairhaven."
- *Question to the Commission*: Would this be something you would like the original peer reviewer for the project to take a look at? The OOC allows the Commission to engage a peer reviewer at the applicant's expense to oversee any aspects of the project. The cost for evaluating the memo would be around $375.

- Additionally, the Order of Conditions requires the applicant submit an interim as-built plan of the completed stormwater management system in addition to a final as-built plan with hydrologic calculations. This will need to be evaluated by an engineer to ensure compliance with the original permit. *Question to the Commission*: Do you want to ask the applicant to provide a peer review fee now in anticipation of these reviews?

RECOMMENDATION

- If the Commission feels the proposed field change is acceptable, I recommend approving the field change.
- If the Commission feels the proposed field change needs to be evaluated, I recommend allowing me to coordinate that process.

Staff Report

Date: September 24, 2019

To: Conservation Commission

From: Whitney McClees, Conservation Agent

Subject: **240 Alden Road – Abbreviated Notice of Resource Area Delineation – DEP# 023-1303, Fairhaven CON 023-075**

DOCUMENTS REVIEWED

- ANRAD application and associated documents
- 310 CMR 10.00
- Fairhaven Wetlands Bylaw (Chapter 192)
- Peer Review by Natural Resource Services, Inc.

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.

- Bank (310 CMR 10.54)
    - *Significance*: Banks are likely to be significant to public or private water supply, to groundwater supply, to flood control, to storm damage prevention, to the prevention of pollution, and to the protection of fisheries and wildlife habitat. When banks are

composed of concrete, asphalt, or other artificial impervious material, said banks are likely to be significant to flood control and storm damage prevention.

Banks are areas where groundwater discharges to the surface and where, under some circumstances, surface water recharges the groundwater. Where banks are partially or totally vegetated, the vegetation serves to maintain the banks' stability, which in turn protects water quality by reducing erosion and siltation.

Banks may also provide shade that moderates water temperatures, as well as providing breeding habitat, escape cover, and food, all of which are significant to the protection of fisheries. The topography, plant community composition and structure, and soil structure of banks together provide important food, shelter, migratory and overwintering areas, and breeding areas for wildlife.

Banks act to confine floodwaters during the most frequent storms, preventing the spread of water to adjacent land. Because banks confine water during such storms to an established channel, they maintain water temperature and depths necessary for the protection of fisheries.

An alteration of a bank that permits water to frequently and consistently spread over a large and more shallow area increases the amount of property which is routinely flooded, as well as elevating water temperature and reducing fish habitat within the main channel, particularly during warm weather.

- Riverfront Area (310 CMR 10.58)
    - *Significance*: Riverfront areas are likely to be significant to protect public or private water supply, to protect groundwater, to provide flood control, to prevent storm damage, to prevent pollution, to protect land containing shellfish, to protect wildlife habitat, and to protect fisheries.

      Land adjacent to rivers and streams can protect the natural integrity of these water bodies. The presence of natural vegetation within riverfront areas is critical to sustaining rivers as ecosystems and providing these public values. The riverfront area can prevent degradation of water quality by filtering sediments, toxic substances (such as heavy metals), and nutrients (such as phosphorus and nitrogen) from stormwater, nonpoint pollution sources, and the river itself. Riverfront areas can also trap and remove disease-causing bacteria that otherwise would reach rivers and coastal estuaries where they can contaminate shellfish beds and prohibit safe human consumption. Natural vegetation within the riverfront area also maintains water quality for fish and wildlife.

      Where rivers serve as water supplies or provide induced recharge to wells, the riverfront area can be important to the maintenance of drinking water quality and quantity. When riverfront areas lack the capacity to filter pollutants, contaminants can reach human populations served by wells near rivers or by direct river intakes. The capacity of riverfront areas to filter pollutants is equally critical to surface water supplies, reducing or eliminating the need for additional treatment.

      By providing recharge and retaining natural flood storage, as well as by slowing surface water runoff, riverfront areas can mitigate flooding and damage from storms. Increases in storage of floodwaters can decrease peak discharges and reduce storm damage. Vegetated riverfronts also dissipate the energy of storm flows, reducing damage to public and private property.

Riverfront areas are critical to maintaining thriving fisheries. Maintaining vegetation along rivers promotes fish cover, increases food and oxygen availability, decreases sedimentation, and provides spawning habitat. Where groundwater recharges surface water flows, loss of recharge as a result of impervious surfaces within the riverfront area may aggravate low flow conditions and increase water temperatures.

Riverfront areas are also important wildlife habitat, providing food, shelter, breeding, migratory, and overwintering areas. Even some predominantly upland species use and may be seasonally dependent on riverfront areas. Riverfront areas promote biological diversity by providing habitats for an unusually wide variety of upland and wetland species. Loss of connectivity, from activities that create barriers to wildlife movement within riverfront areas, results in habitat fragmentation and causes declines in wildlife populations. Wildlife must also be able to move across riverfront areas, between uplands and the river.

Vernal pools are frequently found within depressions in riverfront areas. These pools are essential breeding sites for certain amphibians which require isolated, seasonally wet areas without predator fish. Most of these amphibians require areas of undisturbed woodlands as habitat during the non-breeding seasons. Some species require continuous woody vegetation between woodland habitat and breeding pools. Depending on the species, during non-breeding seasons these amphibians may remain near the pools or travel ¼ mile or more from the pools. Reptiles, especially turtles, often require areas along rivers to lay their eggs. Since amphibians and reptiles are less mobile than mammals and birds, maintaining integrity of their habitat is critical.

PROJECT SUMMARY

- Seeking boundary confirmations of Bordering Vegetated Wetland and Bank

COMMENTS

- Delineation was done October 28, 2017.
- There is currently no work is proposed within jurisdictional areas on these lots.
- The Bordering Vegetated Wetland on site is connected to a larger system of wetlands on Long Road.
- Natural Resource Services, Inc. submitted their peer review letter and noted the following:
    - Flags WFA16, 17, 18, and 20 were removed and reestablished further north largely as a result of soil indicators.
    - Flagging labeled Bank A1 - Bank A36 depicts the bank of a perennial stream which is currently noted as an intermittent stream on the submitted plan. For a perennial stream represented on the USGS topographic map to qualify as 'intermittent', the applicant would need to provide the appropriate documentation. Additionally, the stream was flowing at the time of the peer review.
    - The delineated watercourse should be labeled as a perennial stream and afforded a 200-foot riverfront area per 310 CMR 10.58 and a 100-foot buffer per the Fairhaven Wetlands Bylaw.
    - What appears to be spoils from a greenhouse operation occupy the BVW boundary between WFA7 - WFA10. Material includes fill, plastics, and bricks, among other debris.

FCC may consider this to be an unauthorized alternation and could require the applicant to remove the material from the regulated resource area and buffer zone either through this filing or another process the issuing authority determines to be appropriate.
    - Concrete structures were noted interior of flags WFA2 - WFA6. These structures may be remnants of old fountains. Given their water-holding capacity, these features may also serve as vernal pools. An in-season assessment would be required to confirm whether or not these areas could meet NHESP criteria for vernal pool certification. NRS could not accurately discern a timeframe in which these fountain structures were installed in their review of historic aerial images, due in part to graininess of available photographs.
    - At least 2 dilapidated sheds were also noted within the area near the fountains.
- The applicant has requested a continuance to October 15, 2019 to allow for more time to respond to the peer reviewer's comments.

RECOMMENDATION

- I recommend approving the applicant's request to continue until October 15, 2019.

Staff Report

Date: September 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

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.

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 submitted his proposal for the review of the NOI and delineation with an estimated budget of $2,500.
- Natural Resource Services, Inc. submitted their proposal for the review of the NOI and delineation with an estimated budget of $1,750.00.
- Magdalena Lofstedt submitted her proposal for the review of the NOI and delination with an estimated budget of $2,900.
- I did not receive a proposal from Brooke Monroe, Pinebrook Consulting.
- Brad Holmes will be doing the peer review.
- The applicant has requested a continuance to October 15, 2019 to allow time for the peer review to be completed.

RECOMMENDATION

- I recommend that Commission approve the applicant's request to continue to October 15, 2019.

Staff Report

Date: September 24, 2019

To: Conservation Commission

From: Whitney McClees, Conservation Agent

Subject: **6 Emerson Avenue – Notice of Intent – DEP# 023-1302, Fairhaven CON 19-066**

DOCUMENTS REVIEWED

- Notice of Intent 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 are likely to be significant to flood control and storm damage prevention. LSCSF provides a temporary storage area for flood water and can slow down storm surge flood waters, reducing damage to both man-made and natural features.
- Coastal Beach: No work proposed in the resource area
    - *Buffer Zone Significance*: Buffer Zones play an important role in preservation of the physical, chemical, and biological characteristics of the adjacent resource area (Coastal Beach). The potential for adverse impacts to resource areas from work in the buffer zone increases with the extent of work and the proximity to the resource area.
- Barrier Beach: Located on abutting lot, no work proposed in the resource area.
    - *Buffer Zone Significance*: Buffer Zones play an important role in preservation of the physical, chemical, and biological characteristics of the adjacent resource area (Barrier Beach). The potential for adverse impacts to resource areas from work in the buffer zone increases with the extent of work and the proximity to the resource area.
- Marsh: Located on abutting lot, no work proposed in the resource area.
    - *Buffer Zone Significance*: Buffer Zones play an important role in preservation of the physical, chemical, and biological characteristics of the adjacent resource area (Marsh). The potential for adverse impacts to resource areas from work in the buffer zone increases with the extent of work and the proximity to the resource area.

PROJECT SUMMARY

- Notice of Intent filed for the installation of a garage, stamped patio, and concrete driveway.
- Entire project takes place within Land Subject to Coastal Storm Flowage Zone VE.
- Only the proposed stamped patio falls within the buffer zone to Coastal Beach.
- According to the plan, impervious surface is increasing from 5,416 square feet (30.3%) to 7,703 square feet (43.1%).

COMMENTS

- The amount of impervious surface that is proposed seems to be a large amount for a velocity flood zone area. How might that impact the property itself and the surrounding area?
- The property also falls within Buffer Zone to Barrier Beach and Buffer Zone to Marsh. It is important to consider how diverting any potential flood water or any runoff through the increase of impervious surface might affect the nearby resource areas.
    - The Barrier Beach and Marsh are located south of the property across Emerson Avenue.
- The applicant had previously requested a continuance to the September 16, 2019 meeting to allow for time to submit updated plans to address the Commission's comments from the July 8, 2019 meeting.
- The applicant has indicated updated plans will not be ready for Monday's meeting and has requested a continuance to December 9, 2019.

RECOMMENDATION

- The public hearing was opened July 8, 2019. The Commission could consider requesting that the applicant re-advertise and re-notify abutters.
- I recommend accepting the applicant's request to continue to December 9, 2019.

Staff Report

Date: September 26, 2019

To: Conservation Commission

From: Whitney McClees, Conservation Agent

Subject: **56 Balsam Street – Request for Determination of Applicability – No DEP#, Fairhaven CON 023-089**

DOCUMENTS REVIEWED

- Request for Determination of Applicability and associated documents
- Amended 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.

- Coastal Beach (310 CMR 10.27)
    - Work is outside of the buffer zone to Coastal Beach
- Coastal Dune (310 CMR 10.28)
    - Work is outside of the buffer zone to Coastal Dune

PROJECT SUMMARY

- The applicant filed a permit after-the-fact for a 60’ x 26’ asphalt driveway, which was added to the existing apron and installed for ease of exit from property to avoid backing up into oncoming traffic and to reduce maintenance of the previous stone driveway.
- Board of Public Works issued a permit in June allowing the driveway apron to be widened.

COMMENTS

- Based on my calculations, with the paving of the driveway, lot coverage is now about 36%. The maximum lot coverage for an RR district is 25%. Likely, a variance is needed from the Board of Appeals.
- Given the entire property falls within a VE flood zone, the amount of impervious surface on the lot likely reduces flood control and storm damage prevention. When Land Subject to Coastal Storm Flowage is left pervious or in a natural state, it aids in slowing down flood waters and reducing energy and destruction potential.
- Had this size of driveway come before the Commission prior to its installation, my recommendation would have been to reduce the size and install native plantings to offset the increase in impervious surface within the Velocity flood zone.
- The applicant came by the office on September 20 to discuss what was included in lot coverage and removing the northern part of the new driveway.
- The applicant submitted a letter to the Commission:

To: Conservation Commission
From: Dawn & Ed Lacombe
Address: 56 Balsam St. Fairhaven
Date: September 24, 2019

First, and foremost, I would like to thank the Conservation Committee for their patients in explaining, to us, our situation pertaining to Conservation rules regarding flood zones and the paving of driveways on pervious or impervious ground. We thought that by hiring a contractor who had been with us from the beginning, by demolishing and excavating our original property, were trustworthy when they told us they would take care of all permits. They had just finished a similar job down the street from us. This initiated the long, sort after, driveway process.

Since the notice to appear before you, we have been trying to conform or compromise on a workable solution to our delema on the existing driveway. I recently met with the Commission, on September 16, 2019 and tried to configure ways we could remove our overage of lot size with the driveway which would comply with the 25% requirement. This would allow the area in question to be more pervious.

When I talked to Whitney on Friday, September 20th, 2019, at her office, I notified her that there were areas that should NOT have been counted pertaining to lot coverage. One figure was incorrect and overlooked. For the size of square footage of our property, the 2nd floor, or 1/2 story, was included in the total figure. This was added onto the property size of the first floor according to the field card issued by the town of Fairhaven. Also, we were told by a liscensed Engineer, that the first 8 feet of the apron should not have been included in the square footage of the driveway. That this parcel belongs to the town of Fairhaven. In good faith, we can deduct these two findings. Therefore, by removing the north side of our driveway (23'x14') into a pervious cover, deleting 676 sq.ft. of area from the figure given for the 2nd story and deleting that part of the apron (8'x26') that belongs to the Town of

Fairhaven we should be at the 25% limit of lot coverage. Our contractor agreed to remove said coverage(23'x14') for an additional cost. These findings and the new calculations with these corrected dimentions was confirmed by Ms. McClees at this meeting.

To make a long story short and in conclusion, we would appreciate it if you, The Board, would accept the corrections along with the removal of part of the driveway, when rendering your decision on this matter. This would avoid the time consuming and costly option of moving forward. At our ages,the main purpose for this driveway was to eleviate the physical difficulty and safety of removing snow from an inclinded stone driveway. Also, to improve the safety of pedestrian and automobile traffic when entering the roadway. We never thought we would be in this situation when our contractor gave us a signed permit from the town to move forward.

Our next scheduled meeting is on the 30th of September, 2019. Let us know by E-mail or letter, if the board will discuss this matter and come to an agreement prior to the meeting and if our attendance will be required if a decision can be made beforehand. This would be deeply appreciated.

Thank You Sincerely and
Regretfully submitted;

Ed and Dawn Lacombe

- The applicant submitted an amended Request for Determination on September 26, 2019 encompassing the following:
    - The portion of the driveway to be removed to abide by conservation laws will be that portion on the north side of the driveway (23' x 14') by original contractor who paved it.
- By my calculation, removing this area (14' x 23') will place lot coverage just below 25%.

RECOMMENDATION

- I would recommend closing the public hearing and issuing a Negative 6 Determination and a Negative 3 Determination for the plan dated September 26, 2019 with the following conditions:
    - the Conservation Agent is contacted for an inspection once the removal of northern area of the driveway (14' x 23') is complete
    - at no point shall there be any impact to any of the surrounding resource areas

Staff Report

Date: September 24, 2019

To: Conservation Commission

From: Whitney McClees, Conservation Agent

Subject: **21 Silver Shell Beach Drive – Request for Determination of Applicability – No DEP#, Fairhaven CON 023-091**

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.

- 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.

- Bordering Vegetated Wetland
    - *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.

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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.

- Buffer Zone to Bordering Vegetated Wetland and Coastal Beach
    - 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."

PROJECT SUMMARY

- The applicant is seeking to add fill, loam, and seed to the below three areas to bring the grade up to match the street level or yard level:
    - The front yard is below the street level grade and each time it rains, the front yard floods and makes access to the house difficult. The applicant proposes to bring the grade up approximately 8-9 inches using soil and grass seed.
    - The backyard has a holding septic tank in the ground, which is no longer completely covered by soil/grass and is below grade from the rest of the yard, causing a depression. The applicant proposes to add approximately 4-6 inches of soil and grass seed to level the area to eliminate slip and fall hazards.

- Lot #29 (across Silver Shell Beach Drive) is a small piece of land where the area closest to the street is below street-grade. The applicant proposes to bring in loam and seed to grade a 20' x 32' area level with the street.

COMMENTS

- I see no issues with grading the area in the backyard over the septic tank as the installation of the septic tank was permitted in 2016 and received a Certificate of Compliance. The depression is likely due to settling since the work was completed.
- The area in the front yard falls within Land Subject to Coastal Storm Flowage and is likely outside of the 100-foot buffer zone to the resource areas in the area.
- It is possible that the water is collecting in the front yard due to the installation of the septic system holding tank along the side of the property, funneling more water to the front of the property.
- On Lot #29, the area the applicant proposed to grade to the street falls within the buffer zone to Coastal Beach in addition to LSCSF.
- Gary Lavalette conducted a site visit and provided photographs of the area. He noted that there may be an issue with a slight berm around the storm drain.

RECOMMENDATION

- I recommend asking the applicant to amend their request to include only the work in the backyard and the work on Lot #29 across the street to allow time to see if correcting the berm around the storm drain addresses the issue of water in the front yard.
- If the applicant makes the above amendment, I recommend closing the public hearing and issuing a Negative 3 and Negative 6 Determination with the following condition: At no point shall there be any cutting of vegetation nor shall there be any machinery within a resource area.

Staff Report

Date: September 30, 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.
- Second review by GCG Associates, Inc.

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 would recommend asking the applicant if they would like to request a continuance to the October 15 or the October 28 meeting.

Staff Report

Date: September 30, 2019

To: Conservation Commission

From: Whitney McClees, Conservation Agent

Subject: **46 Charity Stevens Lane – Application Type – DEP# 023-1307, Fairhaven CON 023-090**

DOCUMENTS REVIEWED

- Notice of Intent and associated documents
- 310 CMR 10.00
- Fairhaven Wetlands Bylaw (Chapter 192)
- Stormwater Peer Review Letter by GCG Associates, Inc. dated September 12, 2019
- Stormwater Peer Review Letter by GCG Associates, Inc. dated September 27, 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.

      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.

- Isolated Vegetated Wetland (Fairhaven Wetlands Bylaw, Chapter 192)
    - *Significance*: Many Isolated Vegetated Wetlands (IVWs) are extremely important wildlife habitat, and typically provide all or most of the same habitat functions as Bordering Vegetated Wetlands.

Isolated vegetated wetlands are likely to be significant to public or private water supply, to groundwater supply, to prevention of pollution, and to wildlife habitat. Plants and soils of isolated vegetated wetlands remove or detain sediments, nutrients, and toxic substances that occur in run-off and flood waters.

- Bank (310 CMR 10.54)
    - *Significance*: Banks are likely to be significant to public or private water supply, to groundwater supply, to flood control, to storm damage prevention, to the prevention of pollution, and to the protection of fisheries and wildlife habitat. When banks are composed of concrete, asphalt, or other artificial impervious material, said banks are likely to be significant to flood control and storm damage prevention.

      Banks are areas where groundwater discharges to the surface and where, under some circumstances, surface water recharges the groundwater. Where banks are partially or totally vegetated, the vegetation serves to maintain the banks' stability, which in turn protects water quality by reducing erosion and siltation.

      Banks may also provide shade that moderates water temperatures, as well as providing breeding habitat, escape cover, and food, all of which are significant to the protection of fisheries. The topography, plant community composition and structure, and soil structure of banks together provide important food, shelter, migratory and overwintering areas, and breeding areas for wildlife.

      Banks act to confine floodwaters during the most frequent storms, preventing the spread of water to adjacent land. Because banks confine water during such storms to an established channel, they maintain water temperature and depths necessary for the protection of fisheries.

      An alteration of a bank that permits water to frequently and consistently spread over a large and more shallow area increases the amount of property which is routinely flooded, as well as elevating water temperature and reducing fish habitat within the main channel, particularly during warm weather.

- Land Under Water Bodies or Waterways (310 CMR 10.56)
    - *Significance*: Land under water bodies and waterways is likely to be significant to public and private water supply, to groundwater supply, to flood control, to storm damage prevention, to prevention of pollution, and to protection of wildlife habitat. Where such land is composed of concrete, asphalt, or other artificial impervious material, said land is likely to be significant to flood control and storm damage prevention.

      Where land under water bodies and waterways is composed of pervious material, such land represents a point of exchange between surface and ground water. The soils and sediments play an important role in the process of detaining and removing dissolved and particulate nutrients (such as nitrogen and phosphorus) from the surface water above. They also serve as traps for toxic substances (such as heavy metal compounds).

      Land under water bodies and waterways, in conjunction with banks, serves to confine floodwater within a definite channel during the most frequent storms. An alteration of land under water bodies and waterways that causes water to frequently spread out over a larger area at a lower depth increases the amount of property which is routinely flooded. Additionally, it results in an elevation of water temperature and a decrease in habitat in the main channel, both of which are detrimental to fisheries, particularly during periods of warm weather and low flows.

The plant community composition and structure, hydrologic regime, topography, soil composition, and water quality of land under water bodies and waterways provide important food, shelter, migratory and overwintering areas, and breeding areas for wildlife.

PROJECT SUMMARY

- This project entails construction of new ground-mounted photovoltaic solar arrays, gravel driveways, stormwater facilities, electrical equipment pads, energy storage systems, and above and below-ground utility lines.

COMMENTS

- The report submitted from the wetland scientist includes the following details about the resource areas on the property:
    - The pond appears to be an old irrigation pond and is vegetated with cattails.
    - The isolated wetland is vegetated with red maple, highbush blueberry, poison ivy, and ferns. This area also provides vernal pool habitat.
    - The BVW is located within the woods and within portions of the adjacent field area. The wetlands are dominant in red maple, yellow birch, brier, sweet pepperbush, ferns, skunk cabbage, and highbush blueberry. The wet meadow areas are dominant in sedges, rushes, yellow buttercup, and wetland ferns.
- The proposed eastern solar array does not fall within any of the buffer zones on the property.
- The proposed western solar array proposes construction of panels throughout the buffer zone to Bordering Vegetated Wetland and Isolated Wetlands.
- Portions of the fence surrounding the western array are directly adjacent to the wetland line.
- Approximately 20,000 square feet of vegetation on the southern section of the western array is proposed to be coppiced. Some of that area is within the 100-foot buffer zone.
    - The applicant specified that the area within the buffer zone is about 5,600 square feet on the prior plans.
- The stormwater peer review noted that some minor changes to the plan needed to be made and also noted that the proposed design meets the MassDEP DWW Policy 08-1 (BWR/WWP 17-1), a policy developed for solar photovoltaic development, and the Fairhaven Stormwater Management requirements with the minor adjustments to the size of the infiltration trench and the Long-term Operation and Maintenance Plan.
- The submitted revised plans include the following changes:
    - Erosion barrier at southeast corner of the site
    - Revised recharge volume calculations/stone trench
    - Revised Long-Term Stormwater Operation and Maintenance Plan
    - Clarification of erosion barrier placement to be a minimum of 3 feet outside of the fence
    - The disturbed areas are proposed to be seeded with a native seed mix
    - Erosion controls have been added around the isolated ponds
    - A 25’ no-disturb zone has been added
    - The shading easement tree coppicing has been eliminated
- *Question for Applicant*: On sheet 4, the area labeled “existing vegetation within this area to be selectively coppiced” is off the property near Wetland Flag E46. Is this an error and is the area to be selectively coppiced still in the southern area of the western lease area?
    - The applicant has provided a revised sheet 4 with this text removed.
- *Question for Applicant*: With the revisions to the wetland setbacks, how much of the area proposed to be coppiced/cut is within the buffer zone?

- The peer reviewer's second letter noted that all comments regarding stormwater have been addressed.

RECOMMENDATION

- If the Commission feels the applicant has sufficiently address all questions and comments from the prior meeting and those included in this staff report, I would recommend closing the public hearing and issuing an Order of Conditions with the following conditions:

Approve plans and documents dated September 24, 2019

A. General Conditions
    1. ACC-1
    2. With respect to all conditions except_____, the Conservation Commission designates the Conservation Agent as its agent with full powers to act on its behalf in administering and enforcing this Order.
    3. REC-1
    4. REC-2
    5. ADD-1
    6. ADD-2
    7. ADD-4b
    8. ADD-4c
    9. ADD-5
    10. STO-4
    11. STO-5
    12. The proposed lease areas and the proposed access and utility easement shall be the Limit of Work for this project. No work is permitted beyond this limit line.

B. Prior to Construction
    13. CAP-3
    14. If there are changes to the approved plans due to subsequent permitting processes, the amended plans must be submitted to the Conservation Commission for review and approval.
    15. REC-3
    16. DER-1
    17. PCC-3
    18. EMC-1
    19. PCC-1
    20. SIL-5
    21. Any erosion and sedimentation control used shall not include hay.
    22. The native seed mix to be used on all disturbed areas shall be provided to the Commission for approval prior to use.

C. During Construction
    23. All work shall comply with the Sediment and Erosion Control notes, Construction Period Stormwater Operation and Maintenance schedule and notes, and the Construction notes as outlined on Sheet 6 of the approved plans.
    24. STO-1
    25. STO-3
    26. MAC-3
    27. MAC-6
    28. MAC-7

29. All equipment shall be inspected regularly for leaks. Any leaking hydraulic lines, cylinders, or any other components shall be fixed immediately.
30. DEB-1
31. DEB-5
32. BLD-3
33. BLD-4
34. EMC-2
35. SIL-3
36. SIL-4
37. SIL-8
38. LOW-3
39. WAT-3

D. After Construction/In Perpetuity

40. REV-1
41. RES-4
42. COC-1
43. COC-2

Perpetual Conditions

The below conditions do not expire upon completion of the project.

44. CHM-2 This condition shall survive the expiration of this Order, and shall be included as a continuing condition in perpetuity on the Certificate of Compliance.
45. DER-4
46. All stormwater best management practices (BMPs) shall be operated and maintained as specified in the revised Operation and Maintenance Plan dated September 24, 2019 submitted by Atlantic Design Engineers, Inc. with the Notice of Intent titled "46 Charity Stevens Lane Solar Project At 46 Charity Stevens Lane, Fairhaven, MA 02719 Post-Construction Long Term Stormwater Operation & Maintenance Plan," and incorporated in the Order of Conditions. Evidence of maintenance and complete and thorough inspections of the Stormwater Management system using the "Sample Operation and Maintenance Log" included in the O&M Plan shall be provided to the Commission on a semi-annual basis (once in the spring and once in the fall) and after major rain events or nor'easter storm events (approximately 2.0 inches of rain). This condition shall be noted on the Certificate of Compliance and shall continue in perpetuity.
47. The responsible party shall:
    i. maintain an operation and maintenance log for the last three years, including inspections, repairs, replacement, and disposal (for disposal, the log shall indicate the type of material and the disposal location);
    ii. make this log available to MassDEP and the Conservation Commission upon request; and
    iii. allow members and agents of the MassDEP and the Conservation Commission to enter and inspect the premises to evaluate and ensure that the responsible party complies with the Operation and Maintenance Plan requirements for each BMP.
48. If at any point invasive species are noted in the lease areas, they must be removed by hand immediately. This condition shall be noted on the Certificate of Compliance and shall continue in perpetuity.

E. Stormwater Management

49. The Long-Term Operation and Maintenance Plan must be signed by Clean Energy Collective, LLC prior to any work commencing.
50. All construction and post-construction stormwater management shall be conducted in accordance with the supporting documents submitted with the Notice of Intent, the Department of Environmental Protection Stormwater Management Policy and Stormwater Management Standards, and as approved by the Commission in this Order of Conditions.
    i. Erosion and sedimentation control barriers shall be inspected immediately after each runoff-producing rainfall event and at least daily during prolonged rainfall during construction. Sediment deposits must be removed when the level of deposition reaches approximately one-half the height of the barrier. Sediment shall be disposed of in an area outside of all jurisdictional resource areas.
    ii. Stone trench shall be inspected after every major storm event (2" of precipitation or greater) during construction.
    iii. Grassed swales shall be inspected immediately after each runoff-producing rainfall event and at least daily during prolonged rainfall during construction. Any eroded spots shall be repaired immediately after inspection.
    iv. Vegetated areas within the arrays shall not be mowed more than is absolutely necessary to prevent impact to the arrays.
51. All stormwater Best Management Practices (BMPs) shall be protected from sedimentation and runoff during construction activities. Discharge to these BMPs will only occur once the site has been stabilized.
52. There shall be no increase in the post-development discharges from the storm drainage system or any other changes in post-development conditions that alter the post-development watershed boundaries as currently depicted in the Notice of Intent and approved by this Order of Conditions, unless specifically approved in writing by the Commission.
53. There shall be no sedimentation into any resource area or water bodies from discharge pipes or surface runoff leaving the site.
54. Upon requesting a Certificate of Compliance, the responsible party shall submit an O&M Compliance statement to be included with the Certificate of Compliance, which shall identify the party responsible for the implementation of the Operation & Maintenance Plan and state that:
    i. the site has been inspected for erosion and appropriate steps have been taken to permanently stabilize any eroded areas;
    ii. all aspects of the stormwater BMPs have been inspected for damage, wear and malfunction, and appropriate steps have been taken to repair or replace the system or portions of the system so that the stormwater at the site may be managed in accordance with the Stormwater Management Standards;
    iii. future responsible parties must be notified of their continuing legal responsibility to operate and maintain the structures; and
    iv. the Operation and Maintenance Plan for the stormwater BMPs being implemented.
55. An Illicit Discharge Compliance Statement shall be submitted prior to the discharge of any stormwater to the post-construction stormwater BMPs.
56. A copy of the approved Stormwater Pollution Prevention Plan (SWPPP) must be submitted to the Conservation Commission prior to beginning any activity.

Staff Report

Date: September 30, 2019

To: Conservation Commission

From: Whitney McClees, Conservation Agent

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

Town Beach on West Island

- Still waiting on further communication from violator regarding the $300 fine
- I sent a certified letter requesting documentation of pending payment or payment within 30 days. I have not yet received the return receipt.

40 Wapatma Lane

- The wetland scientist has submitted a figure showing where the wetland line is in relation to active and inactive paddocks.
- The inactive paddock is nearly entirely within a wetland and small portions of the active paddock are within a wetland.
- Would the Commission like to see similar issues addressed here that were addressed on the adjacent property with regard to horse manure and water quality?

88 Fort Street

- The addendum plan to a recent filing was withdrawn and is being addressed as a separate violation due to the placement of fill in a flood zone.
- The engineer sent a letter from an arborist as well as his own recommendations to address the fill in the flood zone and around the tree.
- The letter from the arborist notes the grade was raised approximately 8” in the area within the drip edge of the tree. The arborist recommends:
    - Remove 3”-4” of woodchips from the well. Excess mulch or solid material places on the natural tree’s flare retains moisture which can cause the bark to decay.
    - The material placed around the tree was initially a layer of sand at 1”-2” followed by 7”-8” of loam. The tree should survive this layering (it can sometimes take many years to show the effect). The younger trees seem to adapt to a fill situation better than the older, more established trees like this maple. I would recommend a deep root feeding which is done by putting a series of holes around the tree. This will both aerate and feed the tree’s root system.
- The engineer submitted a revised plan dated September 27, 2019 noting the following:
    - Cinder blocks around tree to remain
    - Previously placed fill to remain
    - Fill on inside of cinder blocks to be removed down to original grade
    - Proposed minor grade adjustment to divert stormwater to new drain
    - Proposed 50’ of keystone block retaining wall, top of wall to be above finish grade to retain stormwater on the site

    - Proposed addition of ads 10” diameter grate and drain basin and 47’ of 6” ads perforated pipe set in 6” minimum bed of stone on sides and below
    - Outfall into 12” wide redi-rock stone drain, cap end with filter fabric or approved screen material
- It appears the plan addresses all of the issues brought up in the September 16 Conservation Commission meeting. The only thing not on the plan is the deep root feeding as recommended by the arborist.
- *Recommendation*: I recommend the Commission or its Agent send the below memo or similar to the property owner:

Memorandum

In order to address the placement of fill in Land Subject to Coastal Storm Flowage without a permit, all work shall be done in accordance with the site plan titled “Addendum – Site Plan” dated September 27, 2019, prepared by Schneider, Davignon & Leone, Inc., signed and stamped by David M. Davignon, P.E.

All work shall occur at the same time as work permitted under SE 023-1305, CON 023-079 and all conditions from that permit apply to this work.

When the work as outline on the above plan is completed, contact the Conservation Agent to conduct an inspection. After the Agent has completed the inspection, the Commission will be provided an update and at that point will determine if the violation has been appropriately addressed.

Bills

- Reimbursement to Whitney McClees for two MACC Courses - $225.00

MACC Fall Conference – October 19, Devens Common Center

- Runs from 8:00am-4:15pm
- Select one class or workshop to attend in the morning one class or workshop to attend in the afternoon
- Registration is $115
- Offering six (6) units of Fundamentals for Conservation Commissioners
    - Unit 102: Wetlands Protection Act Fundamentals, Process, and Procedures
    - Unit 103: Plan Review and Site Visit Procedures
    - Unit 105: Writing Effective Orders of Conditions
    - Unit 201: Getting Home Before Midnight: How to Run an Effective Meeting
    - Unit 204: Managing Conservation Land: Inventories, Goals, and Conflicts
    - Unit 207: Fundamentals of Wetland Enforcement
- Offering four new workshops
    - Urban Forests: Improving Our Communities while Building Climate Change Resilience
    - Culverts: Designing, Constructing, and Paying for Culvert Replacements
    - Native Plants and Pollinators: Making Connections for Conservation
    - Managing Buffer Zones in Massachusetts: Considering the Science while Applying the Regulations