



# The Commonwealth of Massachusetts Division of Marine Fisheries

251 Causeway Street, Suite 400, Boston, MA 02114 p: (617) 626-1520 | f: (617) 626-1509 <u>www.mass.gov/marinefisheries</u>



CHARLES D. BAKER Governor KARYN E. POLITO Lt. Governor KATHLEEN A. THEOHARIDES Secretary RONALD S. AMIDON Commissioner DANIEL J. MCKIERNAN Director

June 25, 2021

Fairhaven Conservation Commission Town Hall 40 Center Street Fairhaven, MA 02719

Dear Commissioners:

The Division of Marine Fisheries (MA DMF) has reviewed the Notice of Intent (NOI) by Heiam Alsawalhi, 1 Bella Vista Island, for proposed groin improvements, seawall and roadside work, and dredging in Round Cove and Nasketucket Bay in the Town of Fairhaven. The NOI includes plans to add stone to an existing seawall to establish an average slope of 2:1. The proposed additional material will not extend seaward of the existing structure. The NOI also includes plans to reconstruct an existing groin, add 12" to 24" stone along the causeway road, and dredge the area under and bordering the causeway bridge. MA DMF has also reviewed the June 10, 2021 letter provided by Prime Engineering, Inc. in response to our previous January 7, 2020 comment letter. Existing marine fisheries resources and habitat and potential project impacts are described below.

The project site lies within mapped shellfish habitat for soft shell clam (*Mya arenaria*), quahog (*Mercenaria mercenaria*), and bay scallop (*Argopecten irradians*). Land containing shellfish is deemed significant to the interest of the Wetlands Protection Act (310 CMR 10.34) and the protection of marine fisheries.

The area offshore of the project site has been mapped by the Massachusetts Department of Environmental Protection as an eelgrass (*Zostera marina*) meadow. Eelgrass beds provide one of the most productive habitats for numerous marine species (Heck *et al.*, 2008; Jackson *et al.*, 2001) and are designated "special aquatic sites" under the Federal Clean Water Act 404(b) (1) guidelines.

MA DMF has identified Round Cove as winter flounder (*Pseudopleuronectes americanus*) spawning habitat. Winter flounder enter the area and spawn from January through May, laying clumps of eggs directly on the substrate. These demersal eggs hatch approximately fifteen to twenty days later. The Atlantic States Marine Fisheries Commission has designated winter flounder spawning habitat as "Habitat Areas of Particular Concern" (HAPC). A recent stock assessment has determined that Southern New England/Mid Atlantic winter flounder populations are at only 23% of the recommended recovery level, and even though it is not currently experiencing overfishing, it is overfished (Northeast Fisheries Science Center, 2014). Because of

the winter flounder stock status, every effort should be made to protect winter flounder and their spawning habitat.

The project site also closely borders salt marsh vegetation. Salt marsh provides a variety of ecosystem services, including habitat and energy sources for many fish and invertebrate species (Deegan & Garritt, 1997; Deegan *et al.*, 2000).

MA DMF offers the following comments for your consideration:

- The June 10, 2021 Prime Engineering response letter adequately addresses potential impacts to marine resources that were identified previously in our January 7, 2020 comment letter. As stated in the response letter, any in-water silt-producing work should be staged to occur outside of the **January 15 to May 31** time-of-year (TOY) restriction period to protect winter flounder during spawning and juvenile development life history phases (Evans *et al.*, 2011).
- The proposed roadside erosion protection (12" to 24" stone) should not displace any existing salt marsh habitat and construction activities should also avoid salt marsh habitat by working from the road.

Questions regarding this review may be directed to John Logan in our New Bedford office at john.logan@mass.gov.

Sincerely,

John Logan, Ph.D. Fisheries Habitat Specialist

cc: Richard Rheaume, Prime Engineering, Inc. Timothy Cox, Shellfish Constable Holly Williams, Tom Shields, MA DMF

#### **References**

- Deegan, L. A., & Garritt, R. H. (1997). Evidence for spatial variability in estuarine food webs. *Marine Ecology Progress Series*, 147, 31–47.
- Deegan, L. A., Hughes, J. E., & Rountree, R. A. (2000). Salt marsh ecosystem support of marine transient species. In M. P. Weinstein & D. A. Kreeger (Eds.), *Concepts and Controversies in Tidal Marsh Ecology* (pp. 333–365). Kluwer Academic Publisher, The Netherlands.
- Evans, N. T., Ford, K. H., Chase, B. C., & Sheppard, J. (2011). Recommended Time of Year Restrictions (TOYs) for Coastal Alteration Projects to Protect Marine Fisheries Resources in Massachusetts. Massachusetts Division of Marine Fisheries Technical Report, TR-47.

- Heck, K. L., Jr., Carruthers, T. J. B., Duarte, C. M., Hughes, A. R., Kendrick, G., Orth, R. J., & Williams, S. W. (2008). Trophic transfers from seagrass meadows subsidize diverse marine and terrestrial consumers. *Ecosystems*, 11, 1198–1210.
- Jackson, E. L., Rowden, A. A., Attrill, M. J., Bossey, S. J., & Jones, M. B. (2001). The importance of seagrass beds as a habitat for fishery species. *Oceanography and Marine Biology: An Annual Review*, *39*, 269–303.
- Northeast Fisheries Science Center. (2014). Operational assessment of 20 northeast groundfish stocks, updated through 2014. Northeast Fisheries Science Center Reference Document 15-24. http://www.nefsc.noaa.gov/publications/crd/crd1524/crd1524.pdf.



# TOWN OF FAIRHAVEN, MASSACHUSETTS

Town Hall · 40 Center Street · Fairhaven, MA 02719

# Buffer Zone Regulations Variance Request

Pursuant to Section 8.0 of the Buffer Zone Regulations under the Fairhaven Wetlands Bylaw, Chapter 192, the Commission may grant a variance from the regulations upon a showing by the applicant that any proposed activity will not have any adverse effect upon any of the interests protected in Chapter 192 of the Code of the Town of Fairhaven (Wetlands).

Location of Proposed Project: 1 Boulder Court	Map 2 Parcel 6C
Owner/Applicant Name: Arthur & Helena Oliveira	
Mailing Address: 2 Harborview Ave. Fairhaven, MA 02719	

Phone Number: <u>508-400-4980</u>	Email: harbor4327@gmail.com
Contractor/Representative: Michael J. Koska	& Assoc. Inc Phone Number: 508-697-7400
Type of Application Submitted:	
Project Description:	

Construction of a single family dwelling located within a V-zone conforming to construction standards for dwellings within a flood plain. Additional activities include the construction of a blue stone driveway, grading and utility installation. Filling is proposed along two areas of the resource area for a total of 398 square feet of filling. The filling will be mitigated with the creation of additional resource area in three locations for a total of 427 square feet of replication. Storm water runoff from the driveway will be directed to a rip rap apron and then a shallow bottom rain garden. Site enhancements include the planting of native plants within a 5-foot strip adjacent to the resource area, the installation of a split rail fence and the planting of Virginia Rose along the split rail fencing at an interval of 5 feet on center. An existing drainage swale will be enhanced with a stone check dam before the resource area and will redirect storm water to a secondary existing swale.

**Explanation of why variance is needed**: Please describe in detail how the project can be completed without significant adverse impacts on the functions, characteristics, and values of the resource areas. Such detail must include, but is not limited to, an alternatives analysis. Attach additional sheets as necessary.

The existing site was approved under the Subdivision Control Law and conforms to the current zoning regulations. The location for the proposed dwelling is limited due to the zoning setback requirements, the location of exiting utilities and storm water control structures and the resource area of Bordering Vegetated Wetland (BVW). Due to these site constraints a portion of the proposed activity falls within the 25-foot buffer zone of the BVW, the majority of which relates to site grading and not the actual dwelling.

The proposed dwelling will be placed on an elevated flood foundation as it is located within a VE zone (EI.=15.0), with the lowest structural member being set at 19.50. The dwelling cannot be relocated on the site without violating the current zoning front yard setback requirements. Activities within the 25-foot buffer zone have been limited to the greatest extent possible

The proposed driveway will be constructed of 3/4"-1" blue stone in lieu of asphalt. Storm water from the proposed driveway will be directed to a rip rap apron and then into a shallow rain garden, which will be planted with switch grass for treatment. The finger-like buffer zone area located at the rear of the property will be planted with native plants and will not be utilized for any recreation activities or accessory structures. A 5-foot strip located adjacent to the BVW line behind the dwelling will also be planted with native plants. Mitigation areas have been created and will be planted with a variety of wetland species. A split rail fence will be placed behind the proposed dwelling to prevent encroachment of the remaining buffer zone area. A row of Virginia Rose will be planted along this fence at an interval of 5 feet on center.

No activities will be allowed beyond the split rail fence to protect the buffer zone and BVW resource area. Additonal signage will be added to demarcate the limited area of activity. The proposed enhancements listed above will provide protection of the resource area and prevent signifcant adverse impacts.



## Introduction

To mitigate for encroachment into buffer zone for the construction of a single family home, the project will fill the wetlands near the areas of encroachment and restore these impacts. The impacts to wetlands account for 398 square feet of fill. To mitigate for this impacts, the project will create 428 square feet of wetlands in the rear portion of the uplands.

# Wetland Mitigation Goals

The *major goals* of the proposed site mitigation and wetland enhancement are to:

- Reestablish the forested wetlands with native plant material Wetland impacts account for 398 square feet. The project will mitigate impacts by developing 428 square feet of forested wetland habitat.
- The mitigation site will be monitored for 2 years with the goal of 95% areal cover of non-invasive hydrophilic species.
- Monitor the restoration area to ensure 95% areal cover of non-invasive hydrophilic species. Vegetation shall have at least 60% cover by non-invasive hydrophytes, including at least 15% cover by woody species. All slopes, soils, substrates, and constructed features within and adjacent to the mitigation site are stable.
- Soil development will be documented for the evidence of redoximorphic features developing by the second year (Year 2) after construction.

# WETLAND MITIGATION DESIGN METHODOLOGY

To mitigate for proposed fill to wetland the project will excavated a series of area within the southern portion of the uplands. These areas were chosen to avoid existing trees. Care will be taken to avoid damage to the trees root system. The existing wetland soil will be excavated and used within the mitigation areas. The project will develop a soil mixture consisting of equal volumes of well-decomposed clean leaf compost and mineral soils. Well-decomposed clean leaf compost shall be clean and free of weed seeds. Commercial peat is not allowed as a soil amendment. The wetland soil mixture shall have 20 to 30 percent organic *matter* (12 to 17 percent organic *carbon* content).

Although voluntary indigenous plants are expected to grow, a supplemental planting program is planned to ensure 95% aerial coverage by noninvasive species. Vegetation shall have at least 60% cover by non-invasive hydrophytes, including at least 15% cover by woody species. All slopes, soils, substrates, and constructed features within and adjacent to the mitigation site are stable.

Plant material will consist of native wetland seed mixes and shrubs. Refer to Mitigation Plan, for a list of proposed planting materials. The goal is to have required coverage within two growing seasons. The shrubs will be mulched with biodegradable weed mat or wood chips to minimize competition between the planted woody strata and tall growing herbs of the wetland seed mix. The herbaceous layer will be seeded by using New England Plants, Inc. Wet Mix or equivalent. Coarse woody material will be installed throughout the restoration area to the maximum extent practicable.

A wetland scientist will be on-site to monitor grading, backfilling and planting of the mitigation area to ensure compliance with the approved mitigation plan. During planting, a qualified wetland professional may relocate up to 50 percent of the proposed plantings if conditions warrant.

# Monitoring of Restoration/Replication Areas

A qualified wetland scientist will inspect the mitigation site at the beginning and end of each growing season for two successive growing seasons following completion of planting. Within 90 days of the fall inspection, a report will be submitted to the Fairhaven Conservation Commission, and Massachusetts DEP Wetlands. At beginning of year 2, if a corrective action is required the project will work with the Fairhaven Conservation Commission to resolve any corrections needed.

### **Monitoring Methods**

Permanent photo stations and vegetation plots will be established in the first season following wetland restoration efforts. These plots will be located randomly. Each of the individual woody plants will be counted, species noted, and condition recorded (i.e. those with at least 75% of the branches alive, whether it is stump sprouting, etc.). This data will be used to calculate survivorship for planted specimens. Additionally, the project will

measure the crown cover and canopy height using a graduated telescoping rod and diameter tape to record average canopy height for each species.

Soil development will be documented for the evidence of redoximorphic features developing by the 2nd year after construction.

General observations will summarize the overall condition of the vegetation including noting signs of wildlife herbivore on vegetation, erosion and any corrective activities conducted during each visit to the site. A list will be generated and maintained documenting amphibians and reptiles, birds and mammals noted at the site.

The wetland scientist is responsible for monitoring and reporting efforts during the establishment period. Responsibilities include quantitative vegetative sampling survey, and other site remedial activities within the restored wetlands. A report will be provided to the Fairhaven Conservation Commission and Massachusetts DEP following each growing season.



# TOWN OF FAIRHAVEN, MASSACHUSETTS

Town Hall · 40 Center Street · Fairhaven, MA 02719

# Buffer Zone Regulations Variance Request

Pursuant to Section 8.0 of the Buffer Zone Regulations under the Fairhaven Wetlands Bylaw, Chapter 192, the Commission may grant a variance from the regulations upon a showing by the applicant that any proposed activity will not have any adverse effect upon any of the interests protected in Chapter 192 of the Code of the Town of Fairhaven (Wetlands).

Location of Proposed Project: Overlook Lane	Map_29_Parcel_1E
Owner/Applicant Name: Overlook Realty Trust	
Mailing Address: c/o: Lauren Francis, P.O. Box 649, Fairhav	en, MA 02719
Phone Number: (508) 993-1219 Email: queensgate15	5@gmail.com
Contractor/Representative: Schneider, Davignon & Leone, Inc. Ph	one Number: <u>(508)</u> 758-7866
Type of Application Submitted:	□ RDA

#### **Project Description:**

The Applicant proposes the development of a residential house lot known as Lot #6 on Definitive Subdivision Plan known as Overlook Acres consisting of the construction of a single family dwelling, gravel driveway and filling and grading within the 100 ft. Buffer Zone of a B.V.W.

**Explanation of why variance is needed**: Please describe in detail how the project can be completed without significant adverse impacts on the functions, characteristics, and values of the resource areas. Such detail must include, but is not limited to, an alternatives analysis. Attach additional sheets as necessary.

The Applicant requests that the Commission grant a Variance from Chapter 192 of the Code of the Town of Fairhaven (Wetlands), specifically from Section 1.3 and 1.4 for regulated activity within the 0-25' and 25 - 50' buffer zones, respectively. The Applicant proposes a 10' wide buffer zone along the northerly BVW and a variable buffer zone along the southerly BVW which generally ranges from 10' to 15'. The Applicant also proposes to construct the house 20' from the northerly BVW and 25' from the southerly BVW.

Due to the unique elongated upland area the only alternative would be "No Build" effectively meeting the requirements of Section 8.2 for a taking without compensation. I have attached a Narrative provided by the property owner which was read into the record at the last Public Hearing which further outlines the uniqueness of the history of the project site and how the land has evolved over time to support the hardship claim.

Irregardless of the above the project provides various development components to minimize any potential adverse impacts from erosion, siltation, loss of groundwater recharge, reduced water quality and damage to or loss of wild life habitat such as roof runoff groundwater chamber recharge systems, a water quality grass swale, limiting the lawn areas and planting a shrub (50 total) and tree (15 total) corridor along both edges of the development to absorb and treat runoff from the site, to act as permanent buffer to the BVW and improve wildlife habitat.

#### Lauren L. Francis, Trustee OVERLOOK REALTY TRUST P.O. Box 649 Fairhaven, MA 02719 508-993-1219

<u>Town of Fairhaven</u> <u>Conservation Commission</u> <u>40 Center Street</u> <u>Fairhaven, MA 02719</u> <u>Attention: Whitney McClees, Agent</u>

Re: DEP File No. SE 23-1239 DEP File No. SE 23-1258 NOI – Single Family Dwelling Lot 4 NOI – Single Family Dwelling Lot 5 NOI – Single Family Dwelling Lot 6 Now Assessors Map 29, Lots 1C, 1D, 1E

Dear Mr. Chairman & Commission Members,

Overlook Realty Trust filed the above cited requests prior to the Boards approval of their new buffer zone regulations, so the new regulations would not apply. Since there are many newer members of the Commission that are not familiar with the long history of this site, a brief synopsis the the events with respect to the Town of Fairhaven Drainage Easement is necessary.

Prior to 1970, this 15 acre site on the west side of Sconticut Neck Road was a horse farm known as "Little Bay Ranch", with the farmhouse, barn and much cleared pasture land. There was an open drainage ditch belonging to the Town of Fairhaven on the southern portion of the land. The property was purchased by developers in 1971, and subdivided into 26 lots and called "Smugglers Beach" and shown on Plan Book 87, Page 8. In 1978, there was a resubdivision into 15 lots shown in Plan Book 106, Page 116. Preliminary roadwork was performed to create Smugglers Beach Drive, with a road cut from Sconticut Neck Road all the way to the shore as shown on the plans. This is evidenced by the dirt piles and boulder rock piles along both sides of the road cut. This old road way, Smugglers Beach Drive, is the same location as the current wetlands located in the middle of the site between lots 5 and 6 on the current Plan 177, Page 71.

The Town's Drainage Easement piping was allowed to fall into substantial disrepair when broken pipes were not replaced when needed. For many years this caused extensive flooding down into the site following the Old Smugglers Beach Drive, through the middle of the property, instead of flowing into the the Town's open ditch on the south side of the property where it was authorized to flow. Old Smugglers Beach Drive is in the same location that has become the wetland area between Lots 5 and 6 of this filing. An Order of Conditions, SE -1258 was issued for the subdivision, with the required replication areas and a gravel surface. However that Order was Amended in December for a paved Overlook Lane roadway as requested by the Planning Board. There was also recorded a DEP Restrictive Covenant regarding the subdivision and the replication areas. The Planning Board signed the final plans 12/12/2017, along with a Homeowners Roadway Agreement, and a Form D Covenant for the roadway.

In 2019, the construction of the subdivision by Overlook Realty Trust began first with the replacement of the Town's distressed piping and associated structures to stop the still continuing flooding issues. Then the replication areas were completed. Followed by the installation of the water, sewer, gas, and electric all underground, then the actual paved roadway. The Board of Public Works has provided an approved As-Built by GCG associates dated November 18, 2019. All of the replication areas grew in very well and no plantings were lost, and have thrived since then. The Town's drainage water now flows into the open Town ditch appropriately. All of these requirements have been accomplished with great expenditure of funds by Overlook Realty Trust. In 2020 not much happened with the project due to Covid-19.

Now in 2021, we are before the Commission for the last step, the NOI site plans for the individual single family dwellings on Lots 4, 5, and 6. Dave Davignon of Schneider, Davignon and Leone, Inc., has prepared all of the appropriate documentation throughout this entire subdivision process for the Planning Board, Board of Public Works, and Conservation Commission. He will make the presentations to the Board on May 10th.

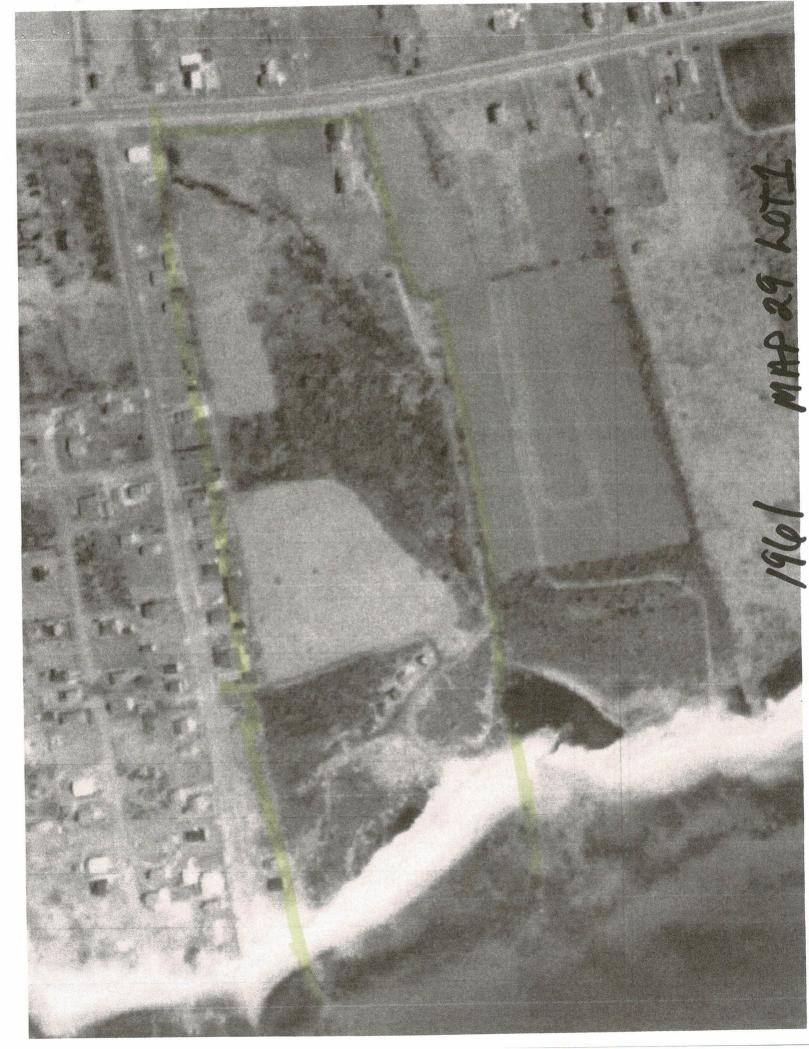
I have written this letter to be read into the record to be sure that all members of the Commission take into consideration, and are aware of all of the unusual issues and circumstances with this site regarding the previously neglected Town's drainage, the Town's easement, and it's disrepair, flooding, and site disturbances associated with same on this site.

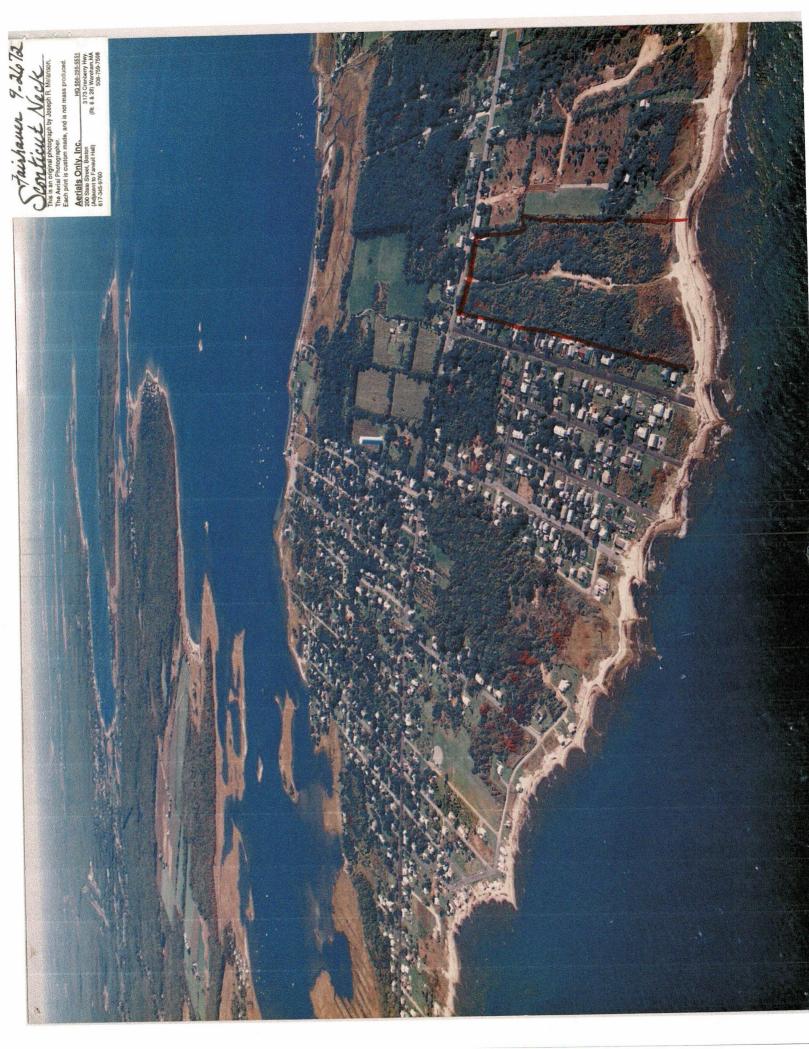
Thank you for your consideration.

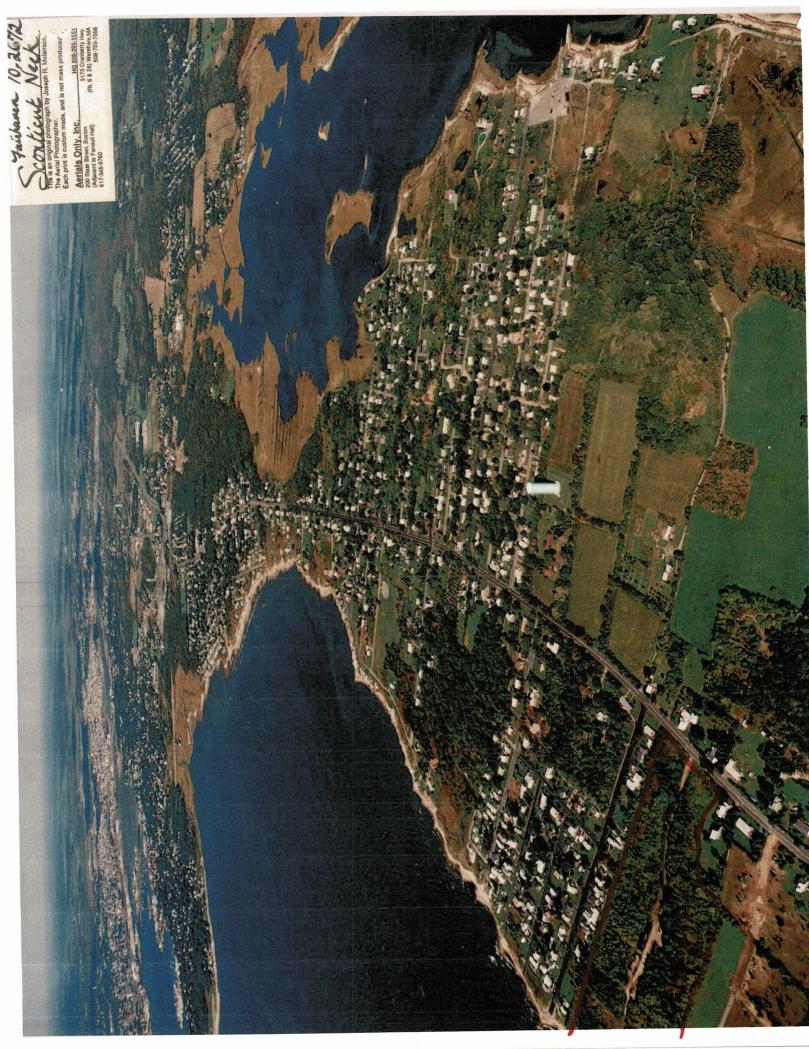
Sincerely,

Lauren L. Francis, Trustee Overlook Realty Trust

Enclosure: 1961 aerial photo







# Schneider, Davignon & Leone, Inc.

**PROFESSIONAL CIVIL ENGINEERS & LAND SURVEYORS** 

N. DOUGLAS SCHNEIDER, P.E., P.L.S. MATTHEW C. LEONE, P.L.S.



DAVID M. DAVIGNON, P.E. JAY MCKINNON, E.I.T.

June 14, 2021

#### *Re: Notice of Intent – Project Narrative*

Applicants/Owners: Alexander T. & Sheila R. May Site Location: 6 Cherrystone Road Lots #148 & #149 Assessors Map #43B

#### Project Purpose:

The purpose of the project is to demolish the existing cottage and build a dwelling in compliance with FEMA and Mass Building Code for construction with an AE (E1. 14) Flood Zone.

#### Site Background:

The lot is 12,000 sq. ft. in size and is bordered southerly by Cherrystone Road, easterly by Cottonwood Street and northerly and westerly by developed residential properties. The property contains a cottage which was constructed circa 1945 according to the Assessors records.

#### Wetland Resource Areas:

Approximately 44% of the site falls within Land Subject to Coastal Storm Flowage, Flood Zone AE (El. 14). There are no other wetland resource areas which exist within 100 ft. of the subject property boundaries.

#### **Project Construction Description:**

#### Proposed Dwelling:

The Applicant proposes to construct a 2-story single family dwelling with a covered front porch and two decks. The dwelling will be built on a crawl space type foundation with hydrostatic flood openings along two walls at the northwesterly corner of the dwelling. The finish slab will be set at elevation 12.5 to match existing grades at the northwest corner. The lowest structural member will be set at elevation 17.0 (3.1 ft. above the base flood elevation of 14.0).

#### Proposed Driveway:

The project includes the construction of a 20' wide paved driveway which will be located outside of the FEMA Mapped Flood Zone as depicted on the plan.

#### Proposed Fill:

The project will require the placement of approximately 80 cubic yards of fill around the perimeter of the foundation to properly direct stormwater away from the foundation.

#### Proposed Utilities:

The house will be serviced by municipal water and sewer. Underground conduits will be installed for electric, cable and telephone service lines.

The Applicant proposes to install 33 ft. of 1" water service pipe from the house to the existing shutoff gate located at the edge of the Cottonwood Street layout.

The Applicant proposes to install 44 ft. of 6" sdr 35 sewer pipe from the house to the existing sewer stub located at the edge of the Cherrystone Road layout.

The Applicant proposes to install 65 ft. of underground conduits for electric, cable and telephone wires from the house to the existing utility pole at the southwesterly lot corner.

Propane tanks are proposed at the northwesterly corner of the dwelling. Said tanks will be anchored to a concrete pad.



**PROFESSIONAL CIVIL ENGINEERS & LAND SURVEYORS** 

#### Erosion Control:

Erosion control is proposed along the northerly and westerly property lines consisting of a staked siltation fence, straw wattles or silt sock.

#### Proposed Stabilization Measures:

Upon completion of the project, the entire site will be stabilized with loam and seed, mulch, pea-stone or other acceptable stabilization methods.

#### Attachments:

- 100-foot Abutters List
- DEP Abutter Notification Form
- Figure 1: U.S.G.S. Sconticut Neck Quadrangle
- Figure 2: Estimated Habitat Map
- Figure 3: Assessors Map #43B.
- Figure 4: Fairhaven FIRM
- 100-foot Abutters List
- DEP Abutter Notification Form
- Site Plan



July 6, 2021

Town of Fairhaven Conservation Commission c/o Whitney McClees, Conservation Agent Town Hall 40 Center Street Fairhaven, MA 02719

Re: Notice of Intent for Invasive Plant Management at Marsh Island

Dear Conservation Commission,

Enclosed please find a Notice of Intent to control approximately 8.2 acres of invasive plants at Marsh Island, located at the western terminus of Taber Street in Faithaven, MA. Buzzards Bay Coalition (BBC) and Fairhaven-Acushnet Land Preservation Trust (FALPT) both own the parcels that comprise this property (see enclosed ownership list). The property was acquired to protect it from development and restore its natural resources. A larger 12-acre salt marsh restoration is eventually planned for the overall property. However, at this time, BBC only proposes to manage invasive vegetation at the site in preparation for the overall wetland restoration.

BBC seeks to implement invasive plant management beginning in late summer 2021. Target species include approximately 7.9 acres of invasive common reed (*Phragmites australis*) and approximately 0.3 acres of other invasive plants, including tree of heaven (*Ailanthus altissima*), large gray willow (*Salix cinerea*), Autumn olive (*Eleagnus umbellata*), Asiatic bittersweet (*Celastrus orbiculatus*), Multiflora rose (*Rosa multiflora*), Mugwort (*Artemisia vulgaris*) and Spotted knapweed (*Centaurea stoebe*). These aggressive non-native species have been establishing and expanding in recent years. Control is proposed to reduce their presence on the site, limit further spread, and prevent them from invading newly restored habitat.

The property is not mapped within any Priority or Estimated Habitats of Rare Species, as determined by the Massachusetts Division of Fish & Wildlife's Natural Heritage & Endangered Species Program (NHESP). However, BBC has identified a small population of a rare plant, Eastern Prickly Pear (*Opuntia humifusa*), along the east side of the property. The small plant population is becoming overwhelmed by several invasive plants, including Autumn olive, Asiatic bittersweet and tree-of-heaven. BBC proposes to carefully manage the invasive vegetation around this plant population to promote its continued growth and expansion. Eastern Prickly Pear is listed by NHESP as Endangered in Massachusetts, but it is believed to be only native to the islands (Dukes and Nantucket Counties) and introduced to the mainland (see enclosed NHESP fact sheet). Therefore, BBC has concurrently submitted this Notice of Intent to NHESP for review and determination of exemption from MESA.

One (1) original plus (1) copy of the following items are enclosed for your use:

- 1. Notice of Intent
  - a. BRP WPA Form 3

All Market Sciences and the second sectors of the sectors

- b. NOI Wetland Fee Transmittal Form
- c. Project Narrative
- d. USGS Map
- e. Marsh Island, Fairhaven Invasive Plants to be Managed, dated July 1, 2021
- f. Photos of invasive plants to be controlled
- g. NHESP Fact Sheet: Eastern prickly pear (Opuntia humifusa)
- h. Wetland Resource Delineation (2021)
- i. Abutter Map with Assessors Parcels
- j. Ownership and Abutter List
- k. Letter of permission from FALPT to permit and implement work
- 2. Proof of Mailing to NHESP and DEP Regional Office (via Certified Mail)
- 3. Abutter Notification
  - a. Notice to Abutters
- 4. Town NOI Fee (\$95) combined with legal advertising fee (\$75), totaling \$170, Check No. 13148, payable to Town of Fairhaven

Please let us know if you have any questions or require further information for review. Thank you.

Sincerely

Sara N. da Silva Quintal Restoration Ecologist

cc: MassDEP SERO (with 1 copy of NOI package, 1 copy of NOI Fee Transmittal Form and 1 copy of State Filing Fee)

MassDEP (with NOI Fee Transmittal Form & State Filing Fee, Check No. 13131) Natural Heritage and Endangered Species Program

#### Invasive Plant Management at Marsh Island, Fairhaven

#### Project Narrative

Buzzards Bay Coalition (BBC) proposes to conduct targeted treatment of approximately 8.2 acres of invasive plants at Marsh Island in Fairhaven, MA beginning in late summer 2021. Marsh Island is a  $\pm$ 22-acre conservation property owned by BBC (Map 15, Lot 1) and Fairhaven-Acushnet Land Preservation Trust (FALPT; Map 17, Lot 129) at the west end of Taber Street.

Target species were identified and mapped by BBC in spring 2021, including approximately 7.9 acres of invasive common reed (*Phragmites australis*) and approximately 0.3 acres of other invasive plants, including tree of heaven (*Ailanthus altissima*), large gray willow (*Salix cinerea*), Autumn olive (*Eleagnus umbellata*), Asiatic bittersweet (*Celastrus orbiculatus*), Multiflora rose (*Rosa multiflora*), Mugwort (*Artemisia vulgaris*) and Spotted knapweed (*Centaurea stoebe*). These aggressive non-native species have been establishing and expanding in recent years. They are proposed to be controlled for at least two growing seasons ahead of a future salt marsh restoration project to reduce their presence on the site, limit further spread, and prevent their incursion into newly restored salt marsh habitat. Annual monitoring and spot treatment of invasive plants is proposed to continue thereafter.

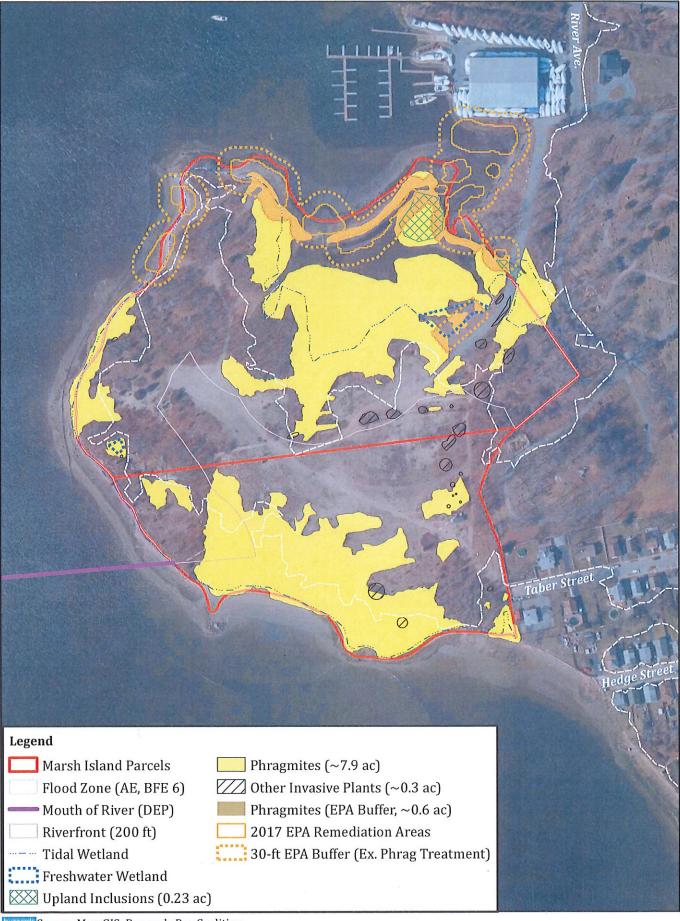
The U.S. Environmental Protection Agency (US EPA) has led the remediation of PCB-contaminated sediment along the north shore of Marsh Island. Remediation work was completed in 2017 and the affected marsh habitats were restored. In conjunction with that work, an additional 0.6 acres of *Phragmites* within a 30-foot buffer of the 2017 remediation areas continue to be treated by US EPA using herbicide (see map of invasive plants to be managed).

Control will be obtained through a combination of manual cut-stem treatments as well as foliar herbicide application to limit their presence and prevent their continued spread on the conservation property. Additionally, beginning to control these plants in late summer 2021 ahead of the larger restoration project (proposed for fall 2022) will result in a much greater chance of success to establish native vegetation in areas of newly created salt marsh.

Management techniques are species specific and include cut-stem treatments for woody species, selective foliar treatments for herbaceous species, and hand wiping or cut and drip applications when near sensitive plant communities. A solution of herbicide (e.g., Rodeo®, EPA Reg. No. 62719-324, or similar formulation), surfactant, and marking dye will be used for all treatments. The work will be conducted by licensed contractors in 2021 and 2022. In subsequent years thereafter, the Coalition will annually monitor the treated areas and spot treat as needed with foliar spray, hand wiping, or cut-stem treatment of herbicide by pesticide-licensed staff. Hand pulling will be utilized where possible for species such as spotted knapweed.

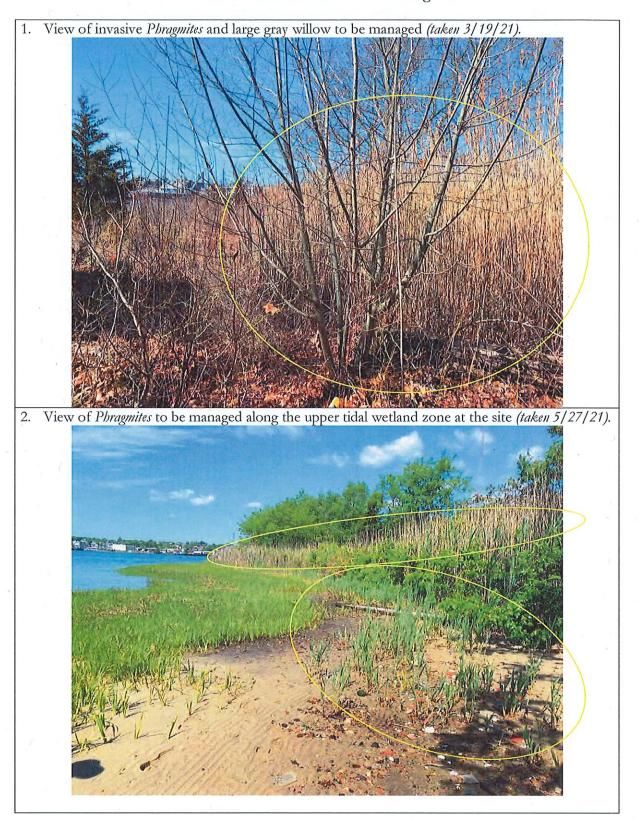
Access to the site will be from Taber Street.

# Marsh Island, Fairhaven Invasive Plants to be Managed

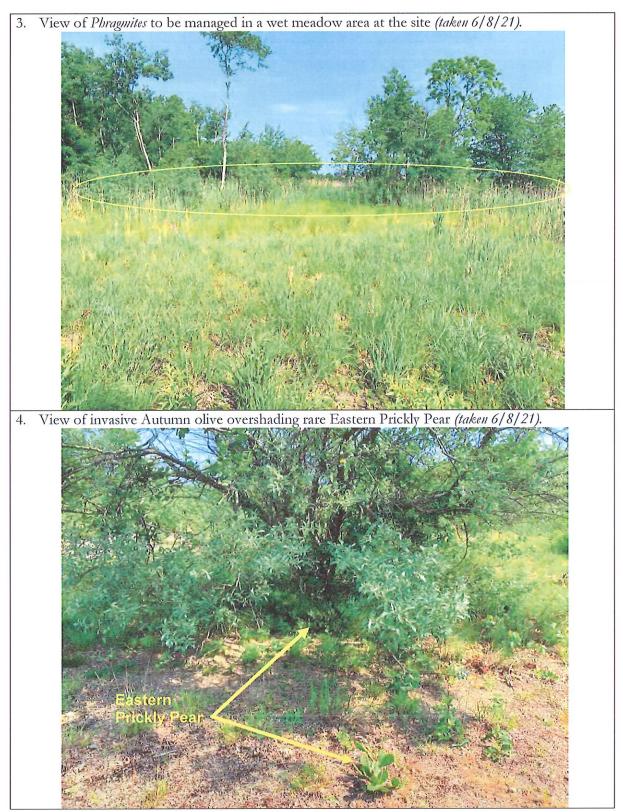


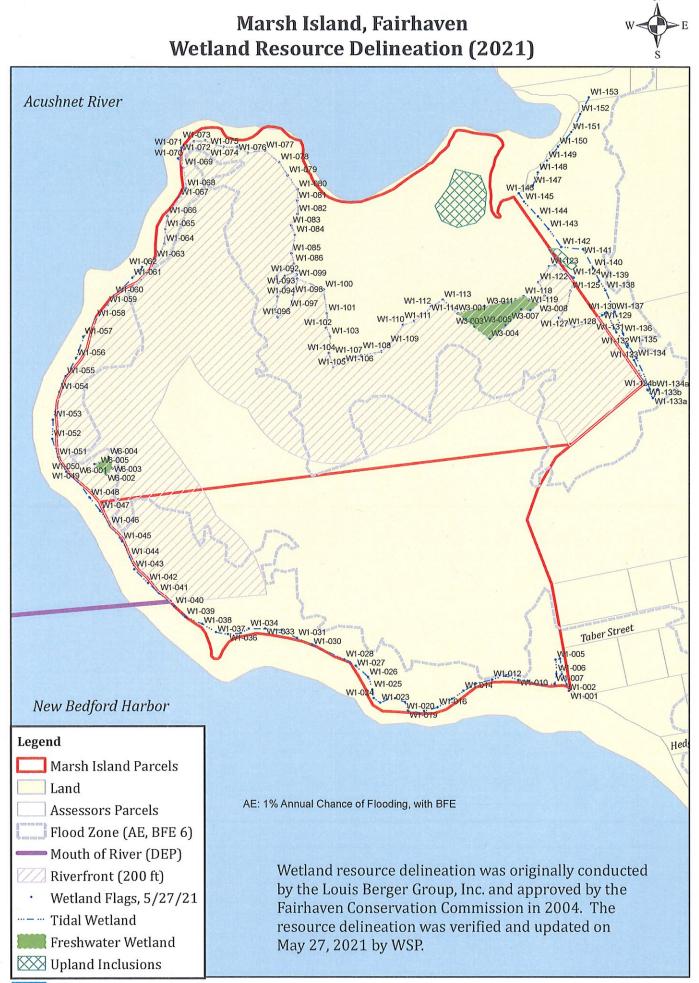
0 50 100 200

Marsh Island Fairhaven, MA



# Photos of Invasive Plants to be Managed





#### Buzzards Source: MassGIS; Buzzards Bay Coalition, WSP (consultant) Printed: July 6, 2021

0 50 100

200 Feet



July 6, 2021

Natural Heritage and Endangered Species Program Division of Fisheries and Wildlife 1 Rabbit Hill Road Westborough, MA 01581

Re: Notice of Intent for Invasive Plant Management at Marsh Island, Fairhaven

Dear Natural Heritage Program,

The Buzzards Bay Coalition (BBC) is proposing to control approximately 8 acres of invasive plants at Marsh Island, located at the western terminus of Taber Street, Fairhaven, MA. BBC acquired the property to protect it from development, restore natural resources, as well as to improve the site for public recreation. A Notice of Intent is concurrently being submitted to you and the Fairhaven Conservation Commission for review under the Wetlands Protection Act. The Conservation Commission's public hearing is scheduled for July 12, 2021.

BBC has identified a rare plant, Eastern Prickly Pear (*Opuntia humifusa*), in a small area along the east side of our property. Eastern Prickly Pear is listed by the Natural Heritage & Endangered Species Program (NHESP) as Endangered in Massachusetts. It is a perennial in the cactus family which occurs in coastal Massachusetts habitats such as open dunes, sandy knolls, grasslands and heathlands. It is not currently known to occur in Bristol County. According to NHESP's fact sheet for this species (attached), "It is native in Dukes and Nantucket Counties, and thought to have been introduced to Plymouth, Middlesex, and Barnstable Counties." At Marsh Island, there is a small population of approximately a dozen plants occurring in somewhat open sandy soil (former dredge spoil), but which is quickly becoming overgrown with several invasive plants, including Autumn olive, Asiatic bittersweet and tree-of-heaven. BBC proposes to carefully manage the invasive vegetation around this plant population to promote its continued growth and expansion.

It is our understanding that the proposed project may be exempt from MESA review because we propose to improve habitat for native and rare species. We are seeking a determination from your office that the proposed project is exempt because it will:

- 1. avoid impacts to rare plants;
- 2. improve and manage habitat for rare plants; and
- 3. not impact rare plants believed to be native to mainland Massachusetts.

Please let us know if you have any questions or require further information for review. Thank you.

Sincerely

Sara N. da Silva Quintal Restoration Ecologist

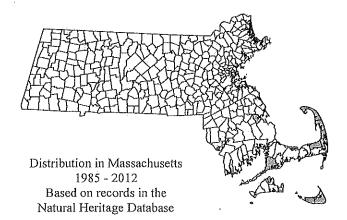
SARAMAN CONSTRUCTION OF A STRUCTURE OF A

Ald Ricold, Steele Research Massachus Stelle (1974) (1915) 1998 Astronomy (1998) 1998 Astronomy (1915) 21 June - Alvenue, Weards Hele, Massachus Steele (1915) 43 (1915) 1985 440 (1922)



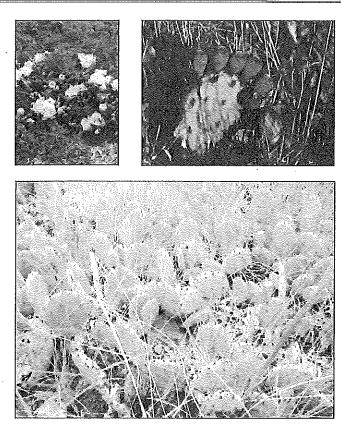
**DESCRIPTION:** Eastern Prickly Pear is a native perennial in the Cactus family (Cactaceae) that spreads along the ground and grows to 0.5 m tall. The pads (stem segments) are glossy green and have areolas (areas where spines are attached) with minute, barbed, deciduous spines called glochids. Some plants also have two longer spines. The flowers are large and showy, with yellow tepals (petals and sepals that are similar); the fruit is fleshy and green initially, becoming pinkish-red as it matures. This species can reproduce by seed or vegetatively by detachment of the pads.

AIDS TO IDENTIFICATION: Eastern Prickly Pear can be observed any time of year, though it is easiest to find in summer when the showy yellow flowers are present. The pads are oblong-obovate, about 5 to 17.5 cm  $\times$  4 to 12 cm in size, and dark to shiny green with areolas arranged in a diagonal pattern. The areolas have whitish-brownish glochids that are about 4 mm in length, with or without stout, longer spines. The pale to bright yellow flowers are 20 to 30 mm across. The fleshy fruits are cylindric, 30 to 50 mm long  $\times$  12 to 20 mm wide, and taper slightly toward the base. The sour, green



# Eastern Prickly Pear Opuntia humifusa (Raf.) Raf.

State Status: Endangered Federal Status: None



Eastern Prickly Pear flowers (top left), fruit (top right), and characteristic spreading growth form (bottom). Top photos by Bruce Sorrie; bottom photo by Bill Nichols.

pulp ripens to reddish and becomes sweet and edible. Numerous seeds within the fruit are roundish and 3.5 to 4.5 mm, with a 1 mm ridge.

**SIMILAR SPECIES:** Other Prickly Pear species are not known from Massachusetts; this species differs from other closely related *Opuntia* species by its strictly yellow tepals. Prairie Prickly Pear (*Opuntia macrorhiza*) flowers have a reddish center and Little Prickly Pear (*Opuntia fragilis*) has greenish-yellow flowers. Eastern

#### A Species of Greatest Conservation Need in the Massachusetts State Wildlife Action Plan Massachusetts Division of Fisheries & Wildlife 1 Rabbit Hill Rd., Westborough, MA; tel: 508-389-6300; fax: 508-389-7890; www.mass.gov/dfw

Please allow the Natural Heritage & Endangered Species Program to continue to conserve the biodiversity of Massachusetts with a contribution for 'endangered wildlife conservation' on your state income tax form, as these donations comprise a significant portion of our operating budget. www.mass.gov/nhesp Prickly Pear only occasionally has long spines, whereas other species frequently have two or more long spines at most areolas.

#### **POPULATION STATUS IN MASSACHUSETTS:**

Eastern Prickly Pear is listed under the Massachusetts Endangered Species Act as Endangered. All listed species are protected from killing, collecting, possessing, or sale, and from activities that would destroy habitat and thus directly or indirectly cause mortality or disrupt critical behaviors. Eastern Prickly Pear is currently known from Barnstable, Plymouth, Dukes, and Nantucket Counties. It is native in Dukes and Nantucket Counties, and thought to have been introduced to Plymouth, Middlesex, and Barnstable Counties. Historical records from Hampden and Essex Counties likely represent introduced plants. Eastern Prickly Pear was known to grow in coastal dune communities as early as the 1830s. It has been documented at Native American archaeological sites in the eastern U.S., presumably because of its sweet, edible fruits. It is unknown whether Native Americans may have introduced this species to Massachusetts.

**RANGE:** Massachusetts is at the northern range limit for Eastern Prickly Pear. It is found from Massachusetts south to Florida and west to Wisconsin and southern Ontario; it is not known to occur naturally in Rhode Island.

HABITAT: Eastern Prickly Pear occurs in coastal Massachusetts in open dunes, low sandy knolls, grasslands and heathlands, and in sunny openings in pine barrens and maritime woodlands. Associated species often include Red Cedar (*Juniperus virginiana*), Bayberry (*Morella pensylvanica*), Dunegrass (*Ammophila breviligulata*), Seaside Goldenrod (*Solidago sempervirens*), and Poison Ivy (*Toxicodendron radicans*). Eastern Prickly Pear has also been found under power lines and in sandy lawns and cemeteries, and it is occasionally planted near dwellings.

#### THREATS AND MANAGEMENT

**RECOMMENDATIONS:** Roads and other development in the coastal region should avoid populations of Eastern Prickly Pear. Fencing and redirecting of trails and ORV roads may help to protect known populations. Caution is needed to avoid plants during mowing. Invasive species removal and control of encroaching native vegetation may be necessary to prevent shading and competition. Natural threats such as storm surges may not be avoidable but plants in eroding areas may be moved or introduced to safer locations with appropriate habitat. Introduction to new locations may be done vegetatively by detached pads or by seeds. All active management of rare plant populations (including invasive species removal) is subject to review under the Massachusetts Endangered Species Act, and should be planned in close consultation with the Massachusetts Natural Heritage & Endangered Species Program.

#### **Flowering in Massachusetts**

Jan		F	Feb		Mar		Apr		May		Jun		Jul		Aug		эp	Oct		Nov		Dec	
										1			N		2.1								

#### **REFERENCES:**

- Gleason, H. A., and A. Cronquist. 1991. Manual of Vascular Plants of Northeastern United States and Adjacent Canada, 2<sup>nd</sup> edition. The New York Botanical Garden, Bronx, NY.
- Haines, A. 2011. Flora Novae Angliae a Manual for the Identification of Native and Naturalized Higher Vascular Plants of New England. New England Wildflower Society, Yale Univ. Press, New Haven, CT.
- Wallace, R. S., and D. E. Fairbrothers. 1987. The New England distribution of *Opuntia humifusa* (Raf.) Raf. *Rhodora* 89: 327-332.

Updated 2019

#### A Species of Greatest Conservation Need in the Massachusetts State Wildlife Action Plan

Please allow the Natural Heritage & Endangered Species Program to continue to conserve the biodiversity of Massachusetts with a contribution for 'endangered wildlife conservation' on your state income tax form, as these donations comprise a significant portion of our operating budget.