

December 10, 2020

Scituate Conservation Commission  
Attn: Ms. Amy Walkey – Agent  
600 Chief Justice Cushing Highway  
Scituate, MA 02066

Re: Notice of Intent – DEP File No. 068-2859  
Swimming Pool Installation  
8 Newell Street

Dear Commissioners:

On behalf of Mr. Christopher Winn (the “Applicant”), South River Environmental is providing supplemental information in support of the above-referenced Notice of Intent for the replacement of an existing semi-inground swimming pool with the installation of a new in-ground swimming pool located at 8 Newell Street. Subsequent to the initial public hearing and field review of the property, Mr. Winn has modified the design of the project to address the concerns raised by the Conservation Commission (Commission) with respect to compliance with the performance standards of the MA Wetlands Protection Act (Act) and Town of Scituate Wetlands Protection Bylaw (Bylaw). In addition, Mr. Winn is now proposing to enhance the function of the existing coastal dune within the project and improve its ability to function to protect the interests of the Act and the Bylaw.

## **Project Design Modifications**

The design and location of the proposed pool have been modified to decrease the overall footprint and increase the offset of the work from the limit of the coastal bank associated with the South River. The pool will now be kidney shaped and has been rotated to the west away from the South River. In addition, the extent of the proposed permeable concrete paver deck surrounding the pool has also been reduced. The work, approximately 850 square feet in total area, is wholly located to the south of existing structures within the property. The majority of the work will be located within the current footprint of the existing pool area.

## **Coastal Dune Enhancement**

To mitigate for the proposed activities within the coastal dune and resource areas associated with the South River, the Applicant is proposing to implement a coastal dune enhancement plan designed to improve the ability of the resource areas to function to protect the interests of the Wetlands Protection Act and Town of Scituate Wetlands Protection Bylaw. The enhancement areas are located to the south and west of the developed portions of the property and total approximately 3,750 square feet which represents over a 4:1 ratio of alteration to enhancement.

The coastal dune enhancement will consist of the following activities:

- Removal of existing debris from the enhancement area including an existing pool and fenced enclosure;
- Removal of an existing concrete wall along the southern limit of the coastal dune that is currently restricting natural movement of the dune;

- Supplementing of the coastal dune with material removed from the excavation for the new pool. The material will be spread in areas that are currently eroded due to storm activity;
- Planting of native dune vegetation to promote plant diversity, enhance stability of the dune and provide for improved wildlife habitat;
- Installation of permanent cedar posts with conservation markers at the northern limits of the dune enhancement area to ensure that no further encroachment occurs.

### **Compliance with Regulatory Performance Standards**

The subject property is located within several coastal resource areas and associated buffer zones including coastal dune, coastal bank, land subject to coastal storm flowage Riverfront Area and barrier beach. The most significant concerns raised by the Commission during the public hearing and field review were associated with the potential effect of the project on the coastal dune and land subject to coastal storm flowage. The following section provides a brief summary of the performance standards associated with these resource areas under both the Act and Bylaw as well as information on project compliance with these standards.

#### **Coastal Dune**

The coastal dune within the property is presumed to be significant to storm damage prevention, flood control and/or the protection of wildlife habitat. Therefore, the proposed activities should be designed to comply with the following performance standards so as to not have an adverse effect on the following functions:

*1) Affecting the ability of the waves to remove sand from the beach*

By removing the small retaining wall at the base of the coastal dune closest to the South River, the proposed project will improve the ability of waves to remove sand from the beach.

*2) Disturbing the vegetative cover so as to destabilize the dune*

The area within the coastal dune where the pool will be located is sparsely vegetated, so the proposed activity will not destabilize the dune. Additionally, the proposed mitigation incorporates a significant amount of revegetation within the dune which will increase dune stabilization.

*3) Causing any modification of the dune form that would increase the potential for storm or flood damage*

The proposed pool will be located at ground level and will not have an impact on the dune form. The coastal dune will maintain its current form, and flood waters will continue to move through the site in a manner similar to existing conditions. The proposed mitigation activities including revegetation of the dune will improve the ability of the dune to function to protect against storm or flood damage by decreasing velocity of water moving through the property and providing additional dune stability.

*4) Interfering with landward or lateral movement of the dune*

The project will not adversely affect the ability of the dune to move laterally or landward as the pool will be installed at grade within a portion of the property that contains multiple structures. The portion of the dune that is most likely to move is located to the south and east of the proposed pool. The lateral or landward movement of the dune will continue to occur in a manner similar to existing conditions.

*5) Causing removal of sand from the dune artificially*

No sand will be removed from the dune. Any material excavated for the pool will be deposited within open areas of the dune within the property and will not be exported from the site. Once the project is completed, there will be no removal of sand associated with operation / use of the pool.

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6) *Interfering with mapped or otherwise identified bird nesting habitat*

The subject property is not located within an area mapped as bird nesting habitat. No evidence of dune-nesting birds has been observed within the property during multiple site visits conducted by SRE during the 2020 breeding season. The project will not interfere with potential bird nesting habitat within the coastal dune.

Land Subject to Coastal Storm Flowage

The MA Wetlands Protection Act Regulations do not have specific performance standards associated with land subject to coastal storm flowage. The Scituate Wetlands Regulations (SWR), however, do provide performance standards for this coastal resource area (SWR 10.38). The SWR presumes that land subject to coastal storm flowage is significant to the interests of flood control and storm damage prevention and is likely to be significant to the prevention of pollution. The SWR also identifies two performance standards for activities proposed within land subject to coastal storm flowage:

- 1) *Any activity shall not have an adverse effect by increasing the elevation or velocity of flood waters or by increasing flows due to a change in drainage or flowage characteristics (e.g. change in direction) on the subject site, adjacent properties, or any public or private way.*

The proposed project will neither increase velocity nor elevation of flood waters. The proposed pool will be installed at grade which will allow for flood waters to pass through the site unimpeded in the same direction as under current existing conditions. In addition, the existing semi-inground pool which extends above the existing grade of the dune will be removed and will eliminate a current structure that has the potential to displace flood water laterally. There will be no new elevated landforms that will displace flood waters onto adjacent properties or the public way the north and east.

- 2) *Relative sea level rise and the landward migration of resource area in response to relative sea level rise shall be incorporated into the design and construction of structures and other activities proposed in Land Subject to Coastal Storm Flowage. At a minimum, for activities proposed in AE & VE zones, the historic rate of relative sea level rise in Massachusetts of 1 foot per 100 years shall be incorporated into the project design and construction by setting the TOP OF THE FOUNDATION one (1) foot above base flood elevation at a minimum unless a higher elevation is determined by the Commission.*

There is no foundation associated within the project, therefore, this performance standard is not applicable.

In addition, in SWR 10.38(c), the SWR identifies five activities likely to have an adverse effect on the protected interests associated with land subject to coastal storm flowage. These activities include (1) new structures, including buildings, sheds, garages, additions and substantial improvements to existing structures supported on a solid foundation or proposed below the base flood elevation; (2) new parallel/shear walls or vertical walls for existing structures; (3) impermeable paving for new roads, driveways and parking lots; (4) new or proposed expansions of coastal engineering structures; and (5) new mounded septic systems. The project proposed under this Notice of Intent does not include any of these activities. The project is not presumed to have an adverse effect on the interests associated with land subject to coastal storm flowage and should, therefore, be reviewed based upon the demonstrated compliance with the applicable performance standard under the SWR.

**Conclusion**

The activities proposed under the Notice of Intent comply with the performance standards for work proposed within the various coastal resource areas as well as the 200-foot Riverfront Area under both the MA Wetlands Protection Act and the Town of Scituate Wetlands Protection Bylaw. In addition, the Applicant is proposing a significant coastal dune enhancement program which will improve its ability to function to protect the associated interests of both the Act and the Bylaw resulting in a net benefit to the resource areas located within the property. On behalf of Mr. Winn, South River Environmental appreciates the opportunity to provide this information. Should you have any questions, please do not hesitate to contact me at 978-697-0854. Thank you for your continued consideration.

Sincerely,  
**South River Environmental**



John Zimmer  
Wetland Scientist

Attachments

Cc: Mr. Christopher Winn  
Mr. Robert Crawford – EET, Inc.  
MA DEP - SERO

# **COASTAL DUNE ENHANCEMENT PLAN**

**8 NEWELL STREET**

**Assessors Parcel 71-13-10F  
Scituate, Massachusetts**

**DEP File No. SE068-2866**

**Prepared for:**

**Christopher Winn  
8 Newell Street  
Scituate, MA 02047**

**Prepared by:**



**South River Environmental  
61 Meetinghouse Lane  
Marshfield, MA 02050**

**December 2020**

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## **1.0 Introduction**

Christopher Winn (the applicant) is proposing to install a new in-ground swimming pool within the property located at 8 Newell Street in Scituate. The subject property is located within or adjacent to several coastal wetland resource areas including barrier beach, coastal dune, land subject to coastal storm flowage and 200-foot Riverfront Area associated with the South River. A Notice of Intent was submitted to the Scituate Conservation Commission (Commission) for the project in August 2020.

During the initial review of the project by the Commission, concerns were raised with respect to the layout of the pool as well as the potential impacts on the coastal dune and coastal floodplain. Subsequent to the public hearing a field review conducted by the Commission, the applicant has revised the scope of the project including a reduced pool and decking footprint and relocation to increase the offset from the limits of the resource areas. The revised project design was submitted to the Commission under separate cover.

The project, as currently proposed, results in the alteration of approximately 850 square feet of land within a portion of the coastal dune that has been historically impacted through residential use of the property. The proposed activities include the removal of the existing aboveground pool and associated decking, installation of the new inground pool and construction of a new 10.4' by 14.4' shed to the west of the pool. The pool and decking will be enclosed by a new aluminum fence.

To mitigate for the proposed activities within the coastal dune and resource areas associated with the South River, the applicant is proposing to implement a coastal dune enhancement plan designed to improve the ability of the resource areas to function to protect the interests of the Wetlands Protection Act and Town of Scituate Wetlands Protection Bylaw. The enhancement areas are located to the south and west of the developed portions of the property and total approximately 3,750 square feet which represents over a 4:1 ratio of alteration to enhancement.

The coastal dune enhancement will consist of the following activities:

- Removal of existing debris from the enhancement area including an existing fenced enclosure;
- Removal of an existing concrete wall along the southern limit of the coastal dune that is currently restricting natural movement of the dune;
- Supplementing of the coastal dune with material removed from the excavation for the new pool. The material will be spread in areas that are currently eroded due to storm activity;
- Planting of native dune vegetation to promote plant diversity, enhance stability of the dune and provide for improved wildlife habitat;
- Installation of permanent cedar posts with conservation markers at the northern limits of the dune enhancement area to ensure that no further encroachment occurs.

The species identified within this enhancement plan are consistent with existing species within and surrounding the property and will re-establish a native plant community within the disturbed coastal dune that will provide stabilization of the dune and wildlife habitat benefits within the Riverfront Area. It is the goal of this effort to achieve at least 75 percent survival of all plantings within two growing seasons. Planting will occur when soil temperature and site conditions are appropriate for transplantation and will be conducted within the 2021 growing season.

Plantings will be accomplished through the use of hardy plant stocks chosen for their compatibility with the local environment as well as the soil conditions within the dune. Commercially available plants will be utilized to accomplish this goal. The planting plan has been designed to blend with the existing vegetation within the property, promote species variability and richness, enhance wildlife edge habitat, and improve the aesthetics of the coastal dune.

## **2.0 Plant Materials**

Table 1 provides detailed information on species to be used. Table 1 identifies the composition of the proposed seed mix that is to be applied within the planting areas. Only plant materials native and indigenous to the region will be used. Species not specified in the plan will not be substituted without written approval from the Conservation Administrator.

The following notes further clarify the proposed planting program:

1. If necessary, mulch will be used around woody plantings in an 18" diameter circle approximately 2" deep to assist in moisture retention. These plantings are identified in Table 2.
2. Final placement of the plantings will be determined in the field by the supervising botanist / wetland scientist. The applicant or applicant's representative will notify the Conservation Administrator a minimum of 96 hours in advance of planting to allow for site-inspection and review of plant locations, if desired.
2. The contractor will be required to maintain adequate moisture for the first growing season following planting to support the plantings (>75% survival is required).

To ensure the success of the proposed planting plan, a botanist or other qualified professional will oversee the planting and make certain that the necessary planting and growing conditions are achieved, and that the benefits of the proposed plan are maximized. During planting, a qualified professional may relocate the plantings if as-built conditions would pose an unreasonable threat to the survival of plantings installed according to the plan. The plantings will be relocated to locations with suitable conditions and where appropriate structural context with other planting cells can be maintained.



**TABLE 1  
PLANT SPECIES LIST**

<b><u>SPECIES</u> COMMON NAME (SCIENTIFIC NAME)</b>	<b>PLANT TYPE</b>	<b>SIZE</b>	<b>CONDITION</b>	<b>QUANTITY</b>
Beach Rose ( <i>Rosa rugosa</i> )	Shrub	2-3'	3 to 5-gallon container	30
Northern Bayberry ( <i>Myrica pensylvanica</i> )	Shrub	2-3'	3 to 5-gallon container	30
Beach Grass ( <i>Ammophila brevifolius</i> )	Grass	2"	Plug	2,000
<b>TOTAL</b>				<b>2,060</b>

### 3.0 Conservation Markers

In accordance with Special Condition d(2), two (2) permanent Conservation Markers inscribed with 'Sensitive Wetland Resource – No Disturbance' shall be installed along the limit of the enhancement area in front (north) of the planted vegetation. The markers will be placed on 4"x4" rot-resistant pressure treated or cedar posts or equivalent. This will aid in discouraging further unauthorized disturbance within and adjacent to the dune.

### 4.0 Control of Invasive / Opportunistic Species

The restoration site has a low to moderate potential for the invasion by non-indigenous species. A qualified botanist or other qualified individual will inspect the planting area at the end of the 2021 growing season for invasive species to determine the presence / extent of invasive / opportunistic species within the planting area. If invasive / opportunistic species are found, a control plan including measures for removal will be developed and submitted to the Conservation Commission for review and approval prior to implementation. The control plan will provide for long-term maintenance activities within the restoration area and buffer zone.

## **5.0 Monitoring Plan**

Within 60 Days of completion of the restoration work, the proponent will submit a signed letter to the Conservation Commission specifying the date of completion of the restoration work. The proponent will monitor the restoration area for a period of two growing seasons. Observations will occur at least once prior to the end the growing season late summer/early fall. Each annual monitoring report shall be submitted to the Conservation Commission no later than December 1 of the year being monitored.

