Natural Resource Services, Inc.

Written Narrative in Support of a
CRMC Assent Application and Variance Request
for a Proposed Single-Family Dwelling

Wilson Drive, A.P. NA, Lot 28K
Narragansett, Rhode Island

Prepared for:
Nicholas & Marjorie Veltri
159 Col. John Gardner Road
Narragansett, RI 02882

Prepared by:

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Principal

December 5, 2022

P.O. Box 311 Harrisville, RI 02830 401-568-7390

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Introduction

Natural Resource Services, Inc. (NRS) has been retained by Nicholas Veltri to assist with the preparation and submission of a Category B assent application to the Coastal Resources Management Council (CRMC). Mr. Veltri, hereafter referred to as the applicant, is the owner of a vacant lot referenced in the Town of Narragansett tax assessor's records as A.P. NK, Lot 28K. the applicant is seeking permission from the CRMC to construct a 2-bedroom single family dwelling on the property. The home has been configured such that the structural lot coverage (SLC) shall be 603 square feet. The applicant sought and received 60 percent front yard setback relief from the town in order to build 10 feet from the Wilson Drive right-of-way limit.

The entire lot falls within 200 feet of a coastal feature as defined in the Coastal Resources Management Program (CRMP). The parcel has direct frontage on the Pettaquamscutt River and as such also falls within the regulatory boundaries of the Narrow River Special Area Management Plan (SAMP). The proposed residential development requires variances in excess of 50 percent from the CRMP's buffer zone and setback standards.

Section 1.1.7 of the CRMP requires that applicants seeking a variance from a program standard make the request in writing and address the six (6) variance criteria listed in the section. This narrative has been prepared on behalf of Mr. Veltri to comply with this variance application requirement.

Existing Site Conditions

The property is a vacant 8,077 square foot (SF) parcel situated at the southwest corner of Wilson Drive and Pettaquamscutt Avenue. This section of Narragansett is a densely developed residential neighborhood with the majority of homes constructed on approximate one quarter acre sized lots. Public sewer and water service is available to all of the homes in the area including the subject property. Figure 1 is a 2022 aerial graphic depicting the subject lot and adjacent shoreline development within 500 feet of its north and south boundaries.

NRS delineated the limit of a coastal wetland within and immediately adjacent to the subject property on September 29, 2020. The resource area is classified as a contiguous freshwater wetland. The vegetative community within the wetland is a monoculture consisting of common reed (*Phragmites australis*), a state listed invasive plant species. The upland portion of the lot is dominated with Japanese knotweed (*Polygonum cuspidatum*), also a state listed invasive plant species. A review of historic aerial photographs reveal a history of land disturbances within and adjacent to the lot which may have created the opportunity for invasive species colonization.

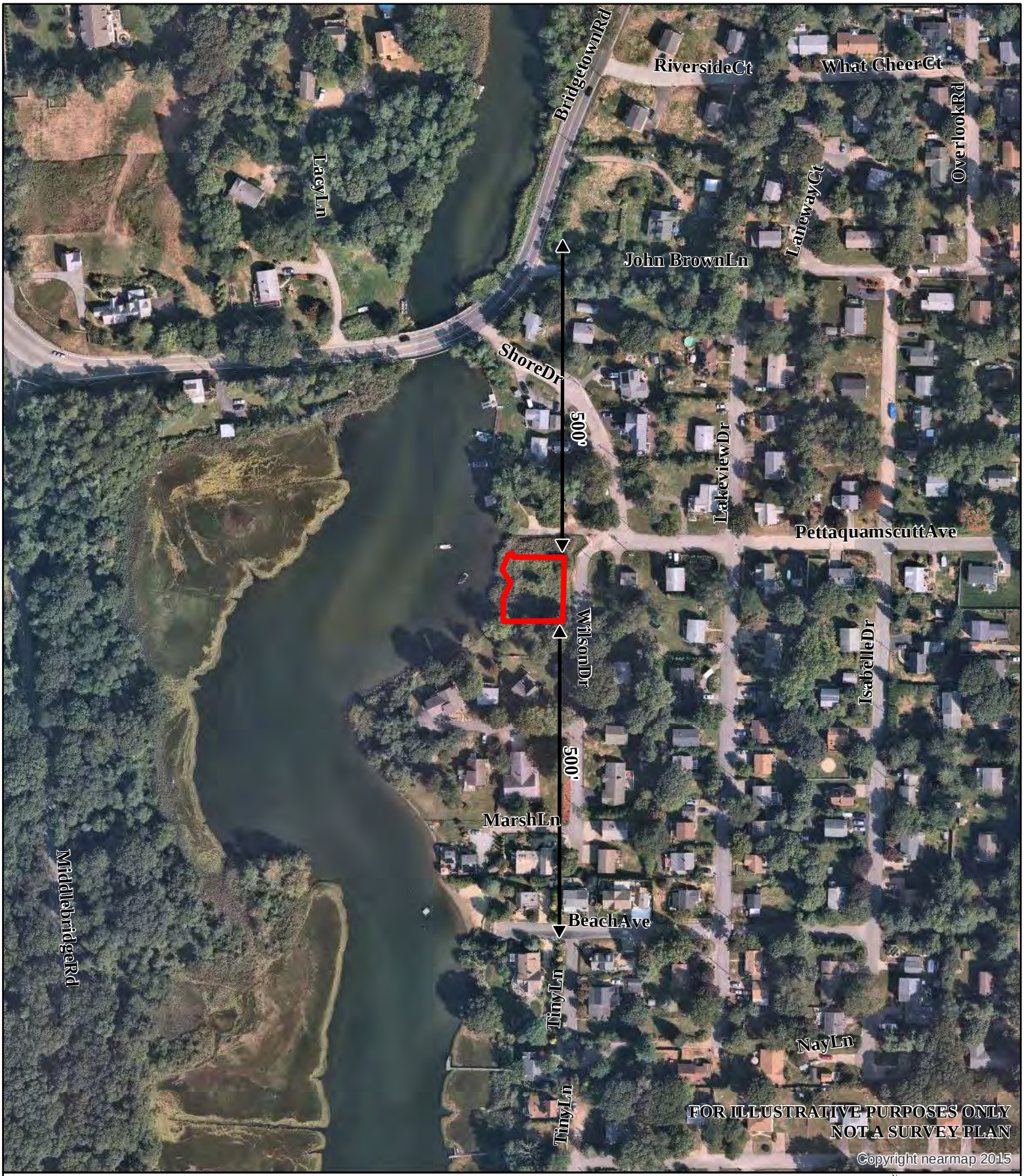

Figure 1:
horeline Development
within 500 feet of
Lot 28K, Wilson Drive
Narragansett, RI

Approximate Site Location

0 100 200 400 Feet

N W E S

RIGIS

September 14, 2022
image (c) nearmap

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(c) RIGIS

Site disturbance in 2011 resulting from Stormwater Drainage Improvements on Pettaquamscutt Ave.

The NRS wetland delineation was survey located and applied to a Class 1 boundary survey plan. The delineation was confirmed as accurate by the CRMC staff as part of a Preliminary Determination (PD) findings issued on February 16, 2021 (CRMC File No. D2020-11-091). The area of wetland present equals 3,801 SF, as calculated by the surveyor, or 47 percent of the lot.

The coastal wetland exists only within the subject property and on the undeveloped portion of Pettaquamscutt Avenue adjacent to the northern property line. There is a town drainage outfall within the wetland. The total size of the coastal wetland (on-site and off-site) is approximately 6,500 SF.

The coastal wetland on the property is associated with the eastern shoreline of the Narrow River. The CRMP classifies this portion of the Narrow River as Type 2 Waters. The property is also within the watershed boundaries of the Narrow River SAMP. The lot falls within the designation of Lands Developed Beyond Carrying Capacity.

The CRMP provides the state with regulatory jurisdiction over all land-use activities occurring within 200 feet of any coastal feature. The entirety of the subject property falls within this jurisdictional limit.

The parcel is less than 10,000 SF in area and is adjacent to Type 2 Waters. Section 1.1.11 of the CRMP requires that a 25-foot buffer zone be applied to the limit of the verified coastal feature. Section 1.1.9 establishes a 50-foot setback requirement for any construction. The 50-foot setback standard extends beyond the limits of the lot.

CRMP Variance Requests

The coastal wetland presence and configuration within Lot 28K results in the 25-foot buffer zone encumbering the majority of the upland area available for residential development. It is not possible for the applicant to use the property for its locally zoned purpose without seeking relief from the CRMC to the buffer zone standard. The 50-foot setback actually extends beyond the property boundaries. It is therefore necessary to also seek a variance from this standard in order to utilize the property for its zoned use. If these variance requests were not granted, the applicant would be denied beneficial use of his land and face what is tantamount to an undue hardship.

Figure 2: Variance Request Charts

Buffer Zone			
Structure	***Required Buffer Zone***	***Proposed Buffer Zone***	***Percent Variance***
Dwelling	25 feet	7 feet	72%

Setback			
Structure	***Required Setback***	***Proposed Setback***	***Percent Variance***
Dwelling	50 feet	12.5 feet	75%
Rain Garden	50 feet	20 feet	60%
Pervious Parking	50 feet	17 feet	66%
Deck	10 feet (from buffer zone)	5 feet	50%

The applicant is seeking variances to the CRMP buffer zone and setback standards for each item listed in Figure 2. The following represents the applicant's response to each of the six (6) variance criteria listed in Section 1.1.7.

1. The proposed alteration conforms with applicable goals and policies of the Coastal Resources Management Program.

The property is situated along a section of the Narrow River which is classified as Type 2 Waters. These areas include waters with high scenic value that support low-intensity recreational and residential uses. As can be seen on Figure 1, this specific shoreline, while classified as Type 2, actually supports moderate density residential use. The visual quality when viewed from the water consists of primarily single-family homes. The proposed addition of another dwelling on the vacant waterfront parcel would not detract from the shorelines scenic quality and is consistent with the existing land use along this section of the Narrow River. As such, the applicant's position is that the variance request conforms with Section 1.2.1(c)(2)(a) as the applicable policy of Type 2 Waters.

Section 1.1.6(I) details the coastal hazard analysis for CRMC applications. The applicant has prepared the required Coastal Hazard Application (CHA) worksheet for both a one (1) foot and three (3) foot sea level rise design scenario. Using the CRMC STORMTOOLS maps, a review of the inundation levels for both the 1- and 3-foot sea level rise scenarios was conducted. This included a review of the impacts from a 25-year coastal storm event with each sea level rise increase. Figure 3 depicts the inundation of the lot and surrounding area with a 1-foot sea level

rise increase. Figure 4 depicts the inundation from a predicted 25-year storm event with the 1-foot of sea level rise.

Based on the STORMTOOLS data, the upland area within the lot would remain above sea level with a 1-foot rise. The lot and all of the surrounding area would be impacted by predicted storm surge from a 25-year event in this same scenario.

The applicant has designed the home with a first-floor elevation set at 14.5 feet. This is 10.5 feet above ground level and 3.5 feet above the AE Flood Zone elevation of 11 feet.

The 14.5 foot elevation also exceeds the STORMTOOLS Design Elevation (SDE) for a predicted 1.47 feet of sea level rise (SDE = 13.9 feet). The SDE for 3 feet of sea level rise would be 17.4 feet. This is 6.4 feet above the current AE flood zone and would not be consistent with allowable building codes. The 14.5 foot elevation, while not accommodating the full 3-foot SDE, is consistent with the CRMP's policies pursuant to Section 1.1.10 and application requirements from Section 1.1.6.

Figure 3:
I dicted Tidal Water Limit
t 1-foot Sea Level Rise
L 28K, Wilson Drive
Narragansett, RI

Approximate Site Location

1-foot Sea Level Rise
(taken from CRMC Stormtools data layer)

0 50 100 200 Feet

Spring 2022 aerial
RI DEM Mapping

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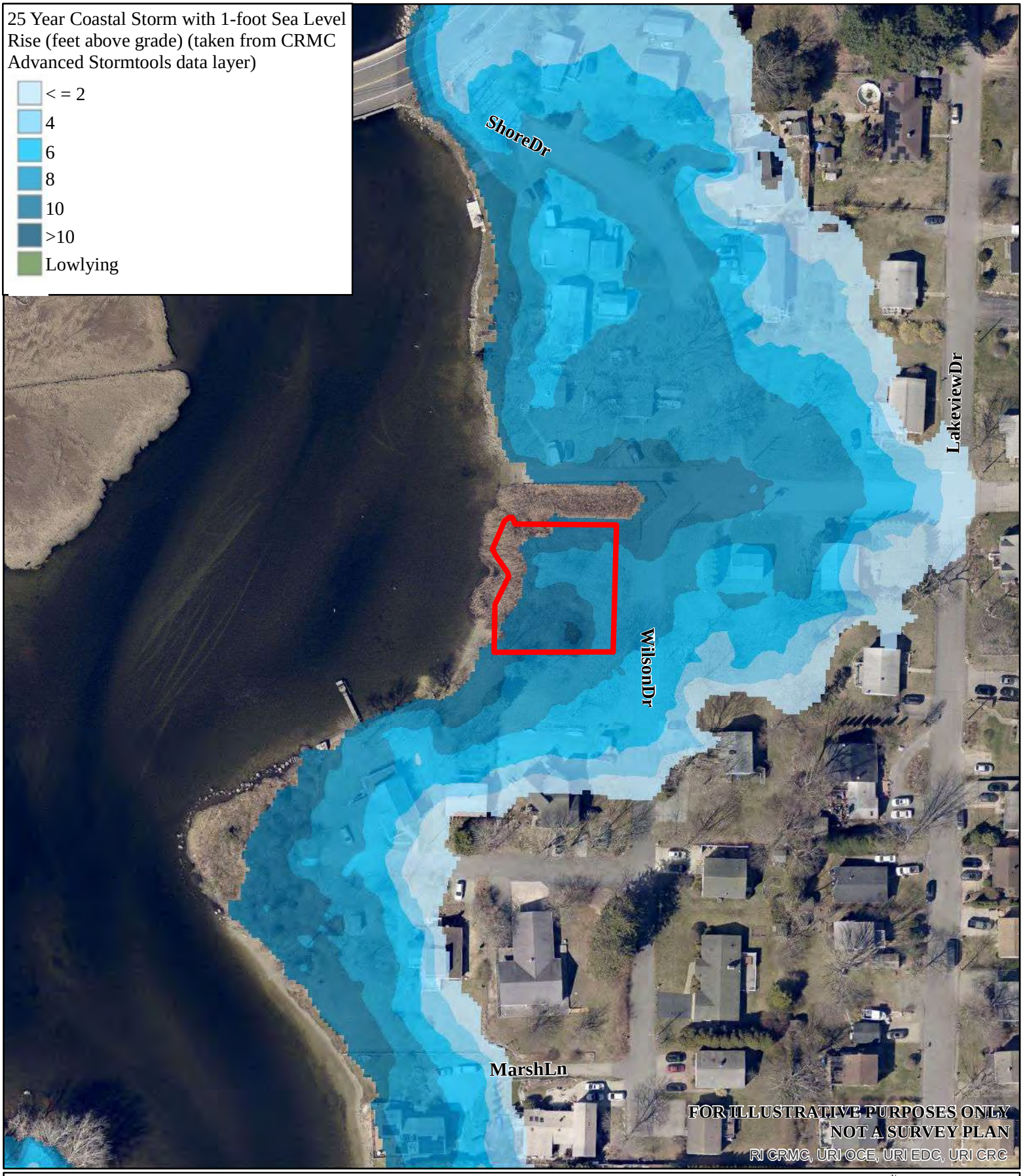

Figure 4:
25-Year Storm Event Surge Limit with 1-foot Sea Level Rise
Lot 28K, Wilson Drive
Narragansett, RI

Approximate Site Location

0 50 100 200 Feet

Spring 2022 aerial
RI DEM Mapping

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Section 4.4.3(C)(1)(c) of the Narrow River SAMP states that for new development proposed on an existing lot within Lands Developed Beyond Carrying Capacity "buffers shall be an absolute minimum of 25 feet." However, the regulatory component of the Narrow River SAMP does not require a Special Exception, only a buffer zone variance when seeking relief below a 25-foot threshold (see Figure 5).

Figure 5: Table 1 from Narrow River SAMP

E. Table 1: CRMC land-use classification requirements for density, setbacks, buffer zones and nitrogen reducing technologies for activities within 200 feet of a coastal feature and all watershed activities as define in §§ 4.4(B)(3) and 4.4(B)(4) of this Part.

Land-use classification	Description	Coastal buffer zone requirement[1]	Construction setback requirement[1]	OWTS setback requirement[1]	Nitrogen reducing technology requirement[1,2]
Developed beyond carrying capacity	Lands developed or undeveloped at < 80,000 square feet [SE or Var]	Coastal buffer based on § 1.1.11 of this Part [Var]	Coastal buffer plus 25 feet	Nitrogen reducing technology required [SE, Var]	New OWTS installations or alteration [4] [SE, Var]
Critical concern	Lands developed or undeveloped at 120,000 square feet and have sensitive salt pond or watershed resources [SE or Var]	200 feet [SE or Var]	Coastal buffer plus 25 feet	225 feet [SE, Var]	Lands subdivided after adoption of SAMP that do not meet the CRMC density requirement and substandard lots of record [SE, Var].
Self-sustaining	Lands developed, undeveloped at 80,000 square feet [SE or Var]	150feet [SE or Var]	Coastal buffer plus 25 feet	200 feet [SE, Var]	Lands subdivided after adoption of SAMP that do not meet the CRMC density requirement and substandard lots of record [SE, Var].

[SE or Var] indicates if relief from the requirement or regulations requires a special exception, variance or both.

This can be explained by the SAMP language using the term "buffer" as opposed to "buffer zone". A buffer zone is a program standard defined in Section 1.1.11 and Section 1.1.2(21). The term buffer on its own is not defined in these sections and is only found in the Program's Rules and Regulations Governing the Protection and Management of Freshwater Wetland in the Vicinity of the Coast. These regulatory requirements are not applied to coastal wetlands.

2. The proposed alteration will not result in significant adverse environmental impacts or use conflicts, including but not limited to, taking into account cumulative impacts.

The applicant is seeking both buffer zone and setback variances on a small lot which has access to municipal sewer and water service. The upland areas within the property have a history of disturbance and Japanese knotweed dominates the area. The knotweed community extends to the limit of the delineated coastal wetland at which point common reed becomes the dominant plant. Each of these plants are state listed non-native/invasive species.

The 72 percent buffer zone variance request would impact lands where the knotweed is dominant. This species typically creates a monoculture over time which in turn limits the value of the affected area for wildlife and wildlife habitat. From this perspective, the buffer zone variance request if granted would not result in a significant adverse environmental impact.

The applicant is also seeking a setback variance for the rain garden and parking area. Each of these stormwater management features have been designed in accordance with the "State of Rhode Island Stormwater Management Guidance for Individual Single-Family Residential Lot Development." The applicant has minimized the roof area to 700 SF. The parking area will meet a pervious standard to avoid stormwater runoff. The minimum amount of impervious surface will limit the potential for pollutant runoff. The properly sized rain garden within the setback would not cause any significant adverse environmental impacts.

There are no anticipated use conflicts resulting from the project or any of the requested variances. The lot is properly zoned for a single-family residence, and Type 2 Waters are also primarily for residential use.

3. Due to conditions at the site in question, the applicable standard(s) cannot be met.

The presence and configuration of the coastal wetlands are the direct source of the applicant's need to seek both the buffer zone and setback variances. It should also be noted that absent the coastal wetland, the present location of the mean high water level, the property's western boundary, would still necessitate some level of relief from the setback standard in order to construct a single-family dwelling on this lot.

4. The modification requested by the applicant is the minimum variance to the applicable standard(s) necessary to allow a reasonable alteration or use of the site.

The applicant has proposed construction of an irregularly shaped dwelling in order to both minimize the SLC on the property and maximize the separation distance from the coastal wetland. At 603 SF, the dwelling footprint is the minimum size possible to allow for a 2-bedroom dwelling. As such, the applicant's buffer zone and setback variance request is the minimum necessary to allow for the reasonable use of this parcel.

5. The requested variance to the applicable standard(s) is not due to any prior action of the applicant or the applicant's predecessors in title. With respect to subdivisions, the Council will consider the factors as set forth in § 1.1.7(B) of this Part below in determining the prior action of the applicant.

The parcel, A.P. NA, Lot 28K, is a legal non-conforming lot of record which was platted by the Town of Narragansett prior to 1971. There have been no changes to or subdivision of this lot by the applicant or the applicant's predecessors in title since the enactment into state law of the CRMP.

6. Due to the conditions of the site in question, the standard(s) will cause the applicant an undue hardship. In order to receive relief from an undue hardship an applicant must demonstrate inter alia the nature of the hardship and that the hardship is shown to be unique or particular to the site. Mere economic diminution, economic advantage, or inconvenience does not constitute a showing of undue hardship that will support the granting of a variance.

The location and configuration of the on-site coastal wetland relegate any proposed dwelling to the 4,276 SF of upland situated along the Wilson Drive frontage. The property is a legal non-conforming lot of record zoned for single-family use. Any proposed residence has the ability to connect to the town's sewer and water service, both of which are present within the lot's Wilson Drive frontage. The applicant has sought and received significant relief from the Town of Narragansett Zoning Ordinance to construct the dwelling using a 10-foot front yard setback (25 feet is the required setback). The applicant's design uses a 603 SF footprint.

The applicant would experience an undue hardship should the CRMC not provide both the buffer zone and setback relief being sought. Such a denial would effectively eliminate the applicant's ability to utilize the property for its clearly established residential use.

Summary

Nicholas Veltri purchased the subject property for the expressed purpose of constructing a small single-family residence. Mr. Veltri and his wife intend to use the home as their permanent Rhode Island residence.

Prior to submitting this Category B application. Mr. Veltri received a PD from the CRMC staff. The PD findings confirmed the accuracy of the delineated coastal feature and cited the CRMP regulatory challenges presented in order to develop within the limited upland area available. The greatest challenge being the significant variances required to the buffer zone and setback standards. CRMC staff also expressed concerns relative to the design life of the structure in light of the agency's predictive sea level rise model.

The applicant has done everything possible to address the staff concerns prior to submitting this application. A reduction in SLC to 603 SF was made as a further minimization effort (the PD plan had a 740 SF dwelling). The applicant utilized a CHA sea level rise increase of 1.47 feet to establish a SDE of 13.9 feet. The proposed dwelling would have a first-floor elevation set at 14.5 feet providing 3 feet of freeboard above the established AE Flood Zone elevation of 11 feet. The applicant sought and received significant zoning relief from the Town of Narragansett to allow for the buffer zone and setback variance requests of 72 percent and 75 percent respectively.

The applicant has thoughtfully and accurately responded to the 6 variance criteria as required by Section 1.1.7 of the CRMP. While the variances being sought to the CRMP buffer zone and setback standards are significant, the facts presented make it clear that it is an undue hardship which drives the request. If the relief were to be denied, the applicant would not be allowed to utilize the property for its legally zoned use.

Appendix 1

CRMC PD Findings Letter

RHODE ISLAND COASTAL RESOURCES MANAGEMENT COUNCIL
REPORT OF FINDINGS -- PRELIMINARY DETERMINATION

STATEMENT OF LIMITATIONS

The contents of this staff determination report shall be valid only for the period on and preceding the date of this report. This report is neither an approval nor denial of the subject proposal. It is an evaluation of CRMC regulations in effect as of **February 16, 2021** as they pertain to the below stated proposal, including preliminary staff recommendations. Modifications to the below stated proposal may, upon the discretion of the CRMC, render this determination null and void.

APPLICANT INFORMATION

NAME: Robert Wyss **CRMC FILE NO.** D2020-11-091
LOCATION/POLE: Wilson Drive
CITY/TOWN: Narragansett **PLAT**: N-A **LOT**: 28-K;28-L

CONTACT PERSON(S) & ADDRESS:

Robert Wyss
57 Saybrook Avenue
Narragansett, RI 02882

Nicholas Veltri, Inc.
26 Juliet Rd.
Narraganasett, RI 02882

PRELIMINARY REVIEW INFORMATION

PROPOSAL: C/m residential dwelling serviced by public utilities

PLAN(S) REVIEWED: "PROPERTY SITE PLAN/SITE GRADING PLAN," two (2) sheets for Lots AP N-A, Lots 28K & 28L, Narragansett dated October 2020 by Nicholas Veltri, PLS

INVESTIGATOR: T. Silvia DATE: 12/15/20 1400hr
MEASUREMENT & OBSERVATIONS: Confirmed coastal feature
PREVIOUS CRMC ACTIONS FOR SITE: #2002-04-118, 2017-09-005

Preliminary Buffer and Setback Requirements:
SETBACK (ref. Section 1.1.7 RED BOOK): 50' from coastal feature (25' from buffer zone)
BUFFER (ref. Section 1.1.9 RED BOOK): 25' from coastal feature

Note: **Setbacks** apply to "construction related activities" including filling, removing, and grading (ref: Section 1.3.1(B) RED BOOK). The coastal program requires a minimum setback of either 50', or the buffer zone width plus 25' (whichever is greater). Work within this minimum setback will require a variance per Section 1.1.5 of the RED BOOK. All variances must be requested in writing. No construction or construction related work shall occur within the required setback (exemptions include structural shoreline protection, outfalls and water dependant uses). Work within the required setback may require a Category "B" review (public notice and decision by the full coastal council) and would likely result in adverse CRMC staff recommendations to the Coastal Council during the review process.

Buffer zones are areas that must be retained in, or allowed to revert to, "an undisturbed natural condition." All structures (excluding accessory structures) should be setback a minimum of 25' from the buffer zone to allow for access, fire protection and maintenance without infringement into the buffer.

Coastal Hazard: In accordance with Section 1.1.10, the applicant is encouraged to utilize CRMC's "STORMTOOLS" mapping feature to better understand the impact of current and future Sea Level Rise and Storms on the subject property. Also, in accordance with Section 1.1.6(I), the applicant is required to complete a "Coastal Hazards Worksheet" to further understand the impact of climate change on a proposal (http://www.crmc.ri.gov/coastalhazardapp.html). While the RICRMP does not yet require structures to be designed for SLR scenarios, the applicant should consider SLR, Climate Change, and design life expectations in design planning.

Coastal feature verification shall be valid for one-year from the date of this Determination or until an erosion event (e.g., due to storm event, landslide, man-induced alteration, etc.) occurs that alters the coastal feature.

NAME: **Wyss**
CRMC FILE NUMBER: **D 2020-11-091**

SUMMARY OF FINDINGS

CRMC JURISDICTION: Yes **TYPE WATER:** II, Narrow River, Low Intensity Use
For the purpose of this review the coastal feature(s) shall be the coastal wetland and the inland edge of coastal(s) feature shall be the inland edge of coastal wetland.

Applicability of Red Book and SAM Plans (as amended):

Red Book Sections: 1.1.4©, 1.1.6(F), 1.1.6((), 1.1.7, 1.1.8, 1.1.9 1.1.10 1.1.11, 1.2.1©, 1.2.2©, 1.2.3,1.3.1(A), 1.3.1(B),1.3.1(C), 1.3.1(F), 1.3.5

SAMP: Narrow River, Lands Developed Beyond Carrying Capacity

STAFF CONCERNS/COMMENTS/INFORMATION REQUIREMENTS:

1) CRMC issued a previous determination report for this parcel in 2017. Staff conducted a current site visit to the project location to verify existing conditions and the inland edge of coastal feature in accordance with the application request for verification of coastal feature. Staff concurs with the delineation shown on the reviewed plans, which is consistent with staff's field findings in 2017 as well

2) The applicant has still not clarified parcel history for this site. The previous PD report noted " The Assessor's database does not provide information for Lot 28-L, but provides data for Lot 28-K as a .21a site (~9148sf) owned by Wyss. The submitted site plans indicate the subject lot size is 7988sf (both 28-K and 28-L?). This shall be clarified for future Assent submittal." This still requires clarification in future applications for actual work.

3) Note #3 from 2017 still stands: "Regardless, provided the combined lot size is <10,000, the RICRMP requires a 25' buffer zone and the Narrow River SAMP requires an "absolute minimum 25 in width" for new development. Section 140 requires an additional 25' setback for a total construction setback of 50' from the inland edge of coastal feature (coastal wetland). It is clear a Section 120 variance response will also be necessary for Assent application review." In staff's opinion, the setback requirements are only more warranted given projected sea level rise impacts to the site.

4) The applicant has provided updated stormwater management information since 2017, consistent with the Red Book requirements (crushed stone driveway and rain garden for roof runoff). However, the BMP is proposed (including grading) almost adjacent to the coastal feature. Stormwater BMPs are subject to the same construction setback as other work, 50' in this case. A variance is required for its proposed location, which is not supported by staff as it is within an area required to be buffer zone as well.

5) Prior report #5 stated: "Even with an updated wetland delineation, it appears that significant variances to the RICRMP and SAMP will be required for residential development on this lot. The proposed work provides no buffer zone (100% variance), the limit of disturbance is proposed coincident with the depicted coastal feature and construction (dwelling, stormwater BMP and parking area) is proposed less than 10' from the depicted feature (almost 100% variance).

Additionally, the ~1000sf dwelling and 600sf parking area do not appear to be a minimization." With the current proposal, the applicant has downsized the dwelling footprint from 1000sf to ~740sf, which staff commends. However, the proposed limit of disturbance is still proposed almost coincident to the coastal feature. The dwelling requires a 38' setback variance, as it is proposed 12' from the wetland and the decks are proposed within 10 (10' minimum setback is required for decks to coastal feature/buffer zone). This setback is measured from the coastal feature as well as from required buffer zone and does not appear to be minimized.

6) Lastly, the required buffer zone ("absolute minimum width" per the Narrow River SAMP) is not met. The proposal shows the required buffer zone label, but it remains unclear to staff where actual buffer vegetation is proposed to be preserved/restored. There does not appear to be an attempt to meet this requirement. Likely, a 100% buffer zone variance is still required for this proposal, which staff cannot support.

7) Consistent with staff 2017 comments, the applicant has conducted a CHA analysis on the parcel, which shows that the project does not meet the recommended SDE of 17.4' for 3' Sea Level Rise (SLR) for the chosen design scenario. Additionally, the analysis shows the chosen design life to be impacted by 3' SLR over the site, as well as suffering impacts with only 1-2' of SLR (likely within a 30yr mortgage).

8) Although the applicant has downsized the proposed dwelling and provided additional stormwater and grading details for the project, the minimum required buffer zone and setback distances on this parcel are still not met with this latest design. Given the lot layout, significant variances are still required. Regardless of variance relief (which staff is unlikely to support), the likelihood of future sea level rise impacts to this site remains high. As such, staff is likely to provide denial recommendations to the full Coastal Council for this project.

Signed _____ **Staff Biologist**

Appendix 2

Coastal Hazard Assessment – 1.47-foot Sea Level Rise

CRMC File Number:

APPLICANT NAME: Nicholas Veltri

PROJECT SITE ADDRESS: Wilson Drive, A.P. NA, Lot 28K - Narragansett

STEP 1. PROJECT DESIGN LIFE

☐ A. For properties in a FEMA-designated **A**, or **X** Zone, provide the first floor elevation (FFE) of the proposed structure referenced to NAVD88, **OR**
For properties in a FEMA-designated **V** or **Coastal A** Zone, please provide the elevation of the lowest horizontal structural member (LHSM) referenced to NAVD88.

FFE 14.5 ft

OR

LHSM elevation ft

☐ B. How long do you want your project to last? Identify the expected design life for the project (CRMC recommends **a minimum of 30 years**)

Design Life: 10 yrs

☐ C. Add the number of years you identified in 1B to the current year.

Design Life Year: 2032

☐ D. **CHECK** beneath the sea level rise (SLR) projection that matches or comes closest to project design life year.

Year	2030	2040	2050	2060	2070	2080	2090	2100	
SLR	1.47	2.13	3.05	4.00	5.15	6.49	7.94	9.41	
	◉	○	○	○	○	○	○	○	○

Source: Sea Level Rise (SLR) Projections (Feb. 2017). NOAA High Curve, 83% Confidence Interval. Newport, RI Tide Gauge. All values are expressed in feet relative to NAVD88. http://www.corpsclimate.us/ccacesicurves.cfm

NOTE: The STORMTOOLS sea level rise scenarios depict how high the water will be above the average height of the daily high tide over the 19-year period between 1983 and 2001. There have been between 4 and 5 inches of sea level rise in Rhode Island since then. The higher modeled water level accounts for the uncertainties in ice sheet and ocean dynamics.

STEP 2. SITE ASSESSMENT

☐ A. Open *RICRMC Coastal Hazard Mapping Tool*. Following the tutorial along the left side of the screen, enter the project site address and turn on the sea level layer closest to the number you circled in 1D.

☐ B. **ENTER** the STORMTOOLS SLR map layer closest to the SLR value you checked in Step 1D above. If the value falls between the available STORMTOOLS SLR map layers, round to the closest of these sea level rise (SLR) numbers: 1ft, 2ft, 3ft, 5ft, 7ft, 10ft, or 12ft

1 ft

☐ C. Does the STORMTOOLS SLR map layer you circled above expose your project site to future tidal inundation? **CHECK YES or NO**

◉ YES
○ NO

☐ D. List any **roads or access routes** that are potentially inundated from SLR. To do this, ZOOM OUT from your project location, change BASEMAP on the viewer to "street view" – see Step 2A.

Pettaquamscutt Ave

Please be advised that CRMC staff may also review the implications of sea level rise in combination with nuisance storm flooding and discuss these potential project concerns with the applicant. Nuisance flooding impacts may be viewed in STORMTOOLS here.

STEP 3. STORMTOOLS DESIGN ELEVATION (SDE)

☐ A. Select your SLR Scenario using the tabs along the top of the online map (*NOTE: RECOMMENDED scenario is 100-year storm plus 3-feet of sea level rise*). Follow the tutorial included along the left panels of the viewer to enter the address of your project site. Select the tab across the top that corresponds to the sea level rise projection you identified in STEP 1. Enter your address on the map, and then click on the project site to identify **STORMTOOLS Design Elevation (SDE)** from the pop-up box. **Enter the SDE value:**

13.9 ft

STEP 4. SHORELINE CHANGE

☐ A. Using the *CRMC Shoreline Change maps*, indicate the transect number closest to your site, and erosion rate listed for that transect. **NOTE: Transects are not available for every site. If this is the case, please enter N/A.**

Transect Number: n/a

Erosion Rate: ft/year

B. **CHECK** below the Projected Erosion Rate that corresponds to the design life you identified above.

Year	2050	2060	2070	2080	2090	2100
Projected Future Erosion Multiplier	1.34	1.45	1.57	1.70	1.84	2.00
	◉	○	○	○	○	○

Source: Projected Shoreline Change Rate multipliers. (Oakley et al., 2016)

C. COMPLETE EROSION SETBACK CALCULATION:

Historic shoreline change rate, STEP 4A		Design Life, STEP 1B		Projected Future Erosion Multiplier, STEP 4B		Erosion Setback (ft) 4A x 1B x 4B
0	X	10	X	1.34	=	0

***NOTE:** Setbacks are required per the CRMC Red Book, Section 1.1.9. A minimum setback of 50-feet is required, but a greater setback may be necessary and/or desirable based on this analysis.*

STEP 5. CERI & OTHER SITE CONSIDERATIONS

☐ A. If you live in a community where a Coastal Environmental Risk Index (CERI) has been completed (Barrington, Bristol, Charlestown, Narragansett, South Kingstown, Warren, Warwick, Westerly), CHECK the level of projected damage to your location, as indicated on the map that corresponds to the design life identified in STEP 1.

CERI Level:	Moderate	High	Severe	Extreme	Inundated by 2100	Not applicable
	○	○	◉	○	○	○

☐ B. Consider and discuss with your design consultant other forces or factors that might impact the development, such as coastal habitats, shoreline features, public access, wastewater, storm water, depth to water table/groundwater dynamics, saltwater intrusion, or other issues not listed above. In addition, pressure from rising sea levels will result in rising subsurface groundwater levels ultimately effecting wells and septic systems.

STEP 6. LARGE PROJECTS

This step is for Large Projects and Subdivisions only, six (6) or more units, as defined by the CRMC Red Book Section 1.1.6.I(1)(f). This step may be skipped for other projects.

☐ A. Use the Sea Level Affecting Marshes Model (SLAMM) Maps to assess potential impacts to large projects and subdivisions from salt marsh migration resulting from projected sea level rise. CRMC SLAMM maps can be accessed here. The CRMC recommends using the 5-foot SLR projection within SLAMM to assess future potential project impacts on migrating marshes. Does the SLAMM map that corresponds to the design life you identified in STEP 1 expose your project site to future salt marsh migration? **CHECK YES or NO**

○ **YES** ○ **NO**

STEP 7: DESIGN EVALUATION

☐ A. Using Chapter 7 of the RI Shoreline Change SAMP as a guide, investigate mitigation options for the exposure identified above and include that in the final application.

This fully completed Coastal Hazard Application Guidance worksheet must accompany the application. If you are a design or engineering professional, please print and sign here that you have discussed the findings of this worksheet with the Owner.

DESIGN/ENGINEER SIGNATURE: _____ **DATE:**

OWNER'S SIGNATURE: _____ **DATE:**

Appendix 3

Coastal Hazard Assessment – 3.05-foot Sea Level Rise

CRMC File Number:

RI CRMC COASTAL HAZARD APPLICATION WORKSHEET

APPLICANT NAME: Nicholas Veltri

PROJECT SITE ADDRESS: Wilson Drive, A.P. NA, Lot 28K, Narragansett

STEP 1. PROJECT DESIGN LIFE

☐ A. For properties in a FEMA-designated **A** or **X** Zone, provide the first floor elevation (FFE) of the proposed structure referenced to NAVD88, **OR**
For properties in a FEMA-designated **V** or **Coastal A** Zone, please provide the elevation of the lowest horizontal structural member (LHSM) referenced to NAVD88.

FFE 14.5 ft
OR
LHSM elevation ft

☐ B. How long do you want your project to last? Identify the expected design life for the project (CRMC recommends a **minimum of 30 years**)

Design Life: 30 yrs

☐ C. Add the number of years you identified in 1B to the current year. (For example, if you are completing this form in the year 2020, and you want your project to last 30 years, your design life year will be 2050.)

Design Life Year: 2050

☐ D. **CHECK** beneath the sea level rise (SLR) projection that matches or comes closest to project design life year.

Year	2020	2030	2040	2050	2060	2070	2080	2090	2100
SLR	1.05	1.67	2.33	3.25	4.20	5.35	6.69	8.14	9.61
	○	○	○	◉	○	○	○	○	○

Source: Sea Level Rise (SLR) Projections (Feb. 2017). NOAA High Curve, 83% Confidence Interval. Newport, RI Tide Gauge. All values are expressed in feet relative to NAVD88. http://www.corpsclimate.us/ccaceslcurves.cfm

NOTE: The STORMTOOLS sea level rise scenarios depict how high the water will be above the average height of the daily high tide over the 19-year period between 1983 and 2001. There have been between 4 and 5 inches of sea level rise in Rhode Island since then. The higher modeled water level accounts for the uncertainties in ice sheet and ocean dynamics.

STEP 2. SITE ASSESSMENT

☐ A. Open *RICRMC Coastal Hazard Mapping Tool*. Following the tutorial along the left side of the screen, enter the project site address and turn on the sea level layer closest to the number you circled in 1D.

☐ B. **ENTER** the STORMTOOLS SLR map layer closest to the SLR value you checked in Step 1D above. If the value falls between the available STORMTOOLS SLR map layers, round up to the closest of these sea level rise (SLR) numbers: 1ft, 2ft, 3ft, 5ft, 7ft, 10ft, or 12ft

3 ft

☐ C. Does the STORMTOOLS SLR map layer you circled above expose your project site to future tidal inundation? **CHECK YES or NO**

◉ YES
○ NO

☐ D. List any **roads or access routes** that are potentially inundated from SLR. To do this, ZOOM OUT from your project location, change BASEMAP on the viewer to "street view" – see Step 2A.

Shore Drive

***Please be advised that CRMC staff may also review the implications of sea level rise in combination with nuisance storm flooding and discuss these potential project concerns with the applicant. Nuisance flooding impacts may be viewed in STORMTOOLS here.*

STEP 3. STORMTOOLS DESIGN ELEVATION (SDE)

☐ A. Based on the project location, CHECK the SDE Viewer for your site, and open the corresponding tab in Mapping Tool:

○ **South Coast SDE Viewer: Napatree to Pt. Judith** ◉ **Narragansett Bay SDE Viewer: North and East of Pt. Judith**

☐ B. Follow the tutorial included along the left panels of the viewer to enter the address of your project site. Select the tab across the top that corresponds to the sea level rise projection you identified in STEP 1

☐ C. Click on the map at project site to identify **STORMTOOLS Design Elevation (SDE)** from the pop up box. **Enter the SDE value:** 17.4 ft

RI CRMC COASTAL HAZARD APPLICATION WORKSHEET

STEP 4. SHORELINE CHANGE

A. Using the *CRMC Shoreline Change maps*, indicate the transect number closest to your site, and erosion rate listed for that transect. **Transect Number:** n/a **Erosion Rate:** 0 **ft/year**

B. **CHECK** below the Projected Erosion Rate that corresponds to the design life you identified above.

Year	2050	2060	2070	2080	2090	2100
Projected Future Erosion Multiplier	1.34	1.45	1.57	1.70	1.84	2.00
	◉	○	○	○	○	○

Source: Projected Shoreline Change Rate multipliers. (Oakley et al., 2016)

C. **COMPLETE EROSION SETBACK CALCULATION:**

Historic shoreline change rate, STEP 4A		Design Life, STEP 1C		Projected Future Erosion Multiplier, STEP 4B		Erosion Setback (ft) 4A x 1C x 4B
0	X	30	X	1.34	=	0

***NOTE:** Setbacks are required per the CRMC Red Book, Section 1.1.9. **A minimum setback of 50-feet is required,** but a greater setback may be necessary and/or desirable based on this analysis.*

STEP 5. CERI & OTHER SITE CONSIDERATIONS

A. If you live in a community where a Coastal Environmental Risk Index (CERI) has been completed (Barrington, Bristol, Charlestown, Narragansett, South Kingstown, Warren, Warwick, Westerly), CHECK the level of projected damage to your location, as indicated on the map that corresponds to the design life identified in STEP 1.

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	○	○	○	○	○	◉

B. Consider and discuss with your design consultant other forces or factors that might impact the development, such as coastal habitats, shoreline features, public access, wastewater, storm water, depth to water table/groundwater dynamics, saltwater intrusion, or other issues not listed above. In addition, pressure from rising sea levels will result in rising subsurface groundwater levels ultimately effecting wells and septic systems.

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A. Use the Sea Level Affecting Marshes Model (SLAMM) Maps to assess potential impacts to large projects and subdivisions from salt marsh migration resulting from projected sea level rise. CRMC SLAMM maps can be accessed here. ○ **YES** ○ **NO**

The CRMC recommends using the 5-foot SLR projection within SLAMM to assess future potential project impacts on migrating marshes. Does the SLAMM map that corresponds to the design life you identified in STEP 1 expose your project site to future salt marsh migration? **CHECK YES or NO**

STEP 7: DESIGN EVALUATION

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DESIGN/ENGINEER SIGNATURE: _____ **DATE:**

OWNER'S SIGNATURE: _____ **DATE:**

Appendix 4

Scott P. Rabideau Qualification Statement

SCOTT P. RABIDEAU

1001 Hill Road, Pascoag, RI · (401) 556-6095 · nrsscott@gmail.com

PROFESSIONAL EXPERIENCE

PRESIDENT/PRINCIPAL BIOLOGIST — 1987-PRESENT
NATURAL RESOURCE SERVICES, INC, HARRISVILLE, RI

Natural Resource Services, which was founded by Scott Rabideau in 1987, is a private environmental consulting firm specializing in freshwater and coastal wetland studies in Rhode Island and Massachusetts. Experience within the company includes:

- Conducting wetland delineations
- Designing replacement wetlands
- Restoring wetlands
- Conducting wildlife habitat evaluations
- Permitting alterations through state and federal agencies
- Providing representation at public hearings
- Providing expert testimony
- Hiring, training, and managing a staff of up to 12

ADMINISTRATOR — 1987-1988
NORTHBRIDGE NURSING HOME, NORTHBRIDGE, MA

Oversaw operations and management of a 100-bed non-union skilled nursing facility.

PERSONNEL DIRECTOR — 1985-1987
HOPKINS HEALTH CENTER, NORTH PROVIDENCE, RI

Responsible for hiring, managing, and scheduling all professional and non-professional nursing staff in a 200-bed unionized skilled nursing facility.

MANAGER, FAXON FARM — 1982-1985
LINCOLN SCHOOL, PROVIDENCE, RI

Managed a 32-acre environmental education center and athletic facility, developed nature programs, and managed wetland and upland habitat at a private K-12 school.

EDUCATION

MASTER OF SCIENCE, APPLIED MANAGEMENT — 1986
LESLEY COLLEGE, CAMBRIDGE, MA

BACHELOR OF SCIENCE, NATURAL RESOURCES — 1982
UNIVERSITY OF RHODE ISLAND, KINGSTON, RI

PROFESSIONAL LICENSES & CERTIFICATIONS

SENIOR PROFESSIONAL WETLAND SCIENTIST #1410
SOCIETY OF WETLAND SCIENTISTS

OWTS INSTALLER #L1379
RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

ELECTED POSITIONS

STATE REPRESENTATIVE, DISTRICT 60 1995-2002
RI GENERAL ASSEMBLY, BURRILLVILLE, RI

- Ranking minority member, Committee on Judiciary
- Ranking minority member, House Committee on Environmental Accountability
- Ranking minority member, Joint Committee on Energy and the Environment
- Ranking minority member, Committee for Redistricting

PUBLIC APPOINTMENTS

SPECIAL MASTER, SUPERIOR COURT 2009-PRESENT
TILLINGHAST VS. RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

- Acting on behalf of the Superior Court to seek resolution in dispute between the defendant and plaintiff regarding freshwater wetland alterations.

JUDICIAL NOMINATING COMMISSION 2014-2020
STATE OF RHODE ISLAND

- Appointed by Governor Lincoln Chafee.
- Responsible for vetting candidates seeking appointments to all state courts, including Supreme, Superior, District, Family, Works Compensation, and Traffic.
- Meeting quarterly or as required to fulfill the statutory mandate for providing the governor with qualified candidates for judicial vacancies.

LEGISLATIVE COMMISSION 2013-2015
FRESHWATER WETLANDS ACT REVIEW

- Acted as a small business representative on the commission.
- Held hearings and heard testimony on changes to the RI Freshwater Wetlands Act.
- Drafted a bill to replace the previous statute–the act was passed by the General Assembly and signed into law by Governor Raimondo in July 2015.

PUBLIC APPOINTMENTS, CONT.

BOARD OF SEWER COMMISSIONERS, CHAIRMAN 2006-2007
TOWN OF BURRILLVILLE, RI

BOARD OF SEWER COMMISSIONERS 2004-2008
TOWN OF BURRILLVILLE, RI

VICE CHAIRMAN, CONSERVATION COMMISSION 1983-1985
TOWN OF REHOBOTH, MA

PROFESSIONAL ORGANIZATIONS

THE WILDLIFE SOCIETY 1985-PRESENT

INVESTMENT REVIEW COMMITTEE MEMBER 2013-2017

- Met on a quarterly basis to review TWS Endowment Accounts.
- Responsible for adjusting account allocations in conformation with TWS Executive Committee's guidelines.

SOCIETY OF WETLAND SCIENTISTS 1995-PRESENT

RI ASSOCIATION OF WETLAND SCIENTISTS

CHARTER MEMBER 1992-1998

PRESIDENT/MEMBER OF BOARD OF DIRECTORS 1993-1994

TREASURER/MEMBER OF BOARD OF DIRECTORS 1992-1993

US DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE 1989-1990

PROJECT EARTH TEAM

PHILANTHROPIC ORGANIZATIONS

TRUSTEE, JUNE ROCKWELL LEVY FOUNDATION 2018-PRESENT

- One of 10 trustees responsible for administering a $30 million charitable trust.
- Responsible for reviewing and distributing grants to qualified non-profits in Providence County.

RI FOREST CONSERVATORS ORGANIZATION 2001-PRESENT

PHILANTHROPIC ORGANIZATIONS, CONT.

OCEAN STATE POWER SCHOLARSHIP FOUNDATION 1995-2002
BOARD OF DIRECTORS

OCEAN STATE POWER COMMUNITY GRANT FOUNDATION 1995-2002
BOARD OF DIRECTORS

VOLUNTEER WORK

BURRILLVILLE LITTLE LEAGUE 2009-PRESENT

- Volunteer umpire for youth baseball

EXPERT QUALIFICATIONS

WETLAND DELINEATIONS, HABITAT EVALUATIONS, & WETLAND PERMITTING

- RI Department of Environmental Management
- Administration Adjudication Division

WETLAND DELINEATIONS, HABITAT EVALUATIONS, SOIL SCIENCE & COASTAL PERMITTING

- RI Coastal Resources Management Council

WETLAND DELINEATIONS, HABITAT EVALUATIONS, & SOIL SCIENCE

- Superior Court, Worcester County, MA
- Superior Court, Bristol County, MA
- Superior Court, Fall River, MA

WETLAND DELINEATIONS, HABITAT EVALUATIONS, SOIL SCIENCE & WETLAND PERMITTING

- Superior Court, Providence County, RI
- Superior Court, Kent County, RI
- Superior Court, Newport County, RI