

# CRMC DECISION WORKSHEET

2022-03-032

Narragansett Bay Commission

Hearing Date:			
Approved as Recommended			
Approved w/additional Stipulations			
Approved but Modified			
Denied		Vote	

APPLICATION INFORMATION						
File Number	Town	Project Location		Category	Special Exception	Variance
2022-03-032	East Providence	102 Campbell Avenue		<b>B</b>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		Plat	302			
		<b>Owner Name and Address</b>				
Date Accepted	3/8/2022	Narragansett Bay Commission		Work at or Below MHW		<input type="checkbox"/>
Date Completed	6/16/2022	One Service Road Attn: Richard Bernier Providence, RI 02905		Lease Required		<input type="checkbox"/>

## PROJECT DESCRIPTION

Filling and grading at Bucklin Point North and South Landfills. Material to be used in this activity is crushed rock material generated from construction on the Pawtucket tunnel. It is estimated that the total amount of fill will be 160,000 cubic yards. The project proposes filling to extend existing slopes to higher elevations. All new slopes will be seeded with native grass or wildflower mix. A variance to 50' setback is required in accordance with Redbook 650-RICR-20-00-01 Section § 1.1.9(B)(1) at an approximately 80 linear foot section North Landfill.

## KEY PROGRAMMATIC ISSUES

**Coastal Feature:** Manmade shoreline, coastal bluff, coastal wetland and contiguous freshwater wetland

**Water Type:** Type 4, Seekonk River

**Red Book:** 1.3.1(B)(1)(f), 1.1.9(B)(1), 1.3.1(F), 1.1.4(D), 1.1.10,

**SAMP:** N/A

Variances and/or Special Exception Details: The project requires a variance to the 50' minimum construction setback for various portions of the proposed work

Additional Comments and/or Council Requirements:

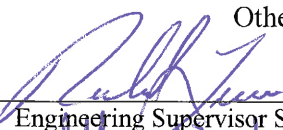
Specific Staff Stipulations (beyond Standard stipulations): See Staff Report

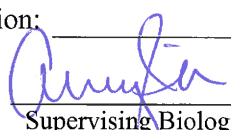
## STAFF RECOMMENDATION(S)


Engineer RML Recommendation: No Objections

Biologist ALS Recommendation: No Objections

Other Staff \_\_\_\_\_ Recommendation: \_\_\_\_\_

  
Engineering Supervisor Sign-Off 6/16/2022 date

  
Supervising Biologist Sign-off 6/16/2022 date

  
Executive Director Sign-Off 16 June 2022 date

Staff Sign off on Hearing Packet (Eng/Bio) \_\_\_\_\_ date

Name: Narragansett Bay Commission  
CRMC File No.: 2022-03-032  
Staff Report



STATE OF RHODE ISLAND  
**COASTAL RESOURCES MANAGEMENT COUNCIL**  
STAFF REPORT TO THE COUNCIL

DATE: 6/14/2022  
TO: Jeffrey M. Willis, Executive Director  
FROM: Richard Lucia, P.E.; Amy Silva

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Applicant's Name:	Narragansett Bay Commission
CRMC File Number:	2022-03-032
	Filling and grading at Bucklin Point North and South Landfills. Material to be used in this activity is crushed rock material generated from construction on the Pawtucket tunnel. It is estimated that the total amount of fill will be 160,000 cubic yards. The project proposes filling to extend existing slopes to higher elevations. All new slopes will be seeded with native grass or wildflower mix. A variance to 50' setback is required in accordance with Redbook 650-RICR-20-00-01 § 1.1.9(B)(1) at an approximately 80 linear foot section North Landfill.
Location:	102 Campbell Avenue; East Providence: Plat(s): 302; Lot(s): 1
Water Type/Name:	Type 4, Seekonk River
Coastal Feature:	Manmade shoreline, coastal bluff, coastal wetland and contiguous freshwater wetland
Plans Reviewed:	Phase III Combined Sewer Overflow Program, Pawtucket Tunnel-Construction Material Reuse Bucklin Point Landfills-East Providence

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**INTRODUCTION:**

The site has an extensive permitting history; the list of permits includes: 2020-07-075, 2011-08-031, 2011-04-051, 2001-05-107, 1996-02-051, 1991-03-016, 1990-09-015, 1990-02-045, 1987-03-058, 1986-05-039 and 1986-05-038.

RIDEM Office of Water Resources has issued an approval dated April 21, 2022 for the proposed reuse of tunnel material at the landfills as a Modification to the Existing Orders (Order of Approval No. 954 and 1268). Please note since the RIDEM has not reviewed the stormwater controls for this approval and has made this approval conditional upon the completion of the public notice and the issuance of a CRMC Assent.

This proposal is essential for the disposal of the "Tunnel Muck" from the construction of the Phase III (Pawtucket Tunnel), project (CRMC Assent 2020-02-043). The Pawtucket Tunnel will generate approximately 600,000 cubic yards of material in the form of crushed rock from the 30-foot diameter, 11,600-foot-long tunnel. This work is to dispose a portion of this material at the North and South landfills at Bucklin Point Wastewater Treatment Facility (WWTF). The amount to be deposited at the subject location is approximately 25% of the total material or approximately 160,000 cubic yards.

The North Landfill final peak grade after placement of fill shall be 66 feet MSL (NGVD 1929). The existing grade at the peak is 50 feet MSL. Therefore, the grade will be raised approximately 16 feet at the plateau. A 3H:1V maximum slope will be constructed with a flatter plateau.

The South Landfill final peak grade after placement of fill shall be 47.5 feet MSL (NGVD 1929). The existing grade at the peak is 21.5 feet MSL. Therefore, the grade will be raised approximately 26 feet at the plateau. A 3H:1V maximum slope will be constructed with a flatter plateau.

Additionally, a passive gas venting system has been proposed at the North Landfill because of the discovery of methane during subsurface investigation. The venting system will consist of a gravel trench of crushed stone and perforated PVC pipe at the eastern toe of the landfill, buried beneath the surface alongside new swales between the landfill and paved access road. The vertical pipe risers will be centered approximately 200 feet on center to allow for sufficient venting.

Upon completion of grading, the site shall be loamed and seeded, with minimum eight inches of loam. A conservation grass seed mixture approved by the CRMC biologist shall be used to seed the South Landfill. Furthermore, a row of tree saplings and shrubs shall be planted along the shoreline to act as a seed source for regrowth of the buffer zone, with the species planted approved by CRMC biologist. A 50-foot wide buffer zone on the north and south sides of the South Landfill, expanding to 100 feet wide on the central western shore, shall be established and retained in a natural undisturbed condition in perpetuity.

As stated in the applicant's narrative, NBC, has chosen this site for numerous reasons, the following is a summary of the rationale behind choosing this site:

- The project is proposed on landfills that have been closed for decades, land which is not actively being used by NBC for other purposes.
- NBC owns and controls the landfill sites, so there will be no disposal tipping fees unlike offsite disposal locations.
- The Bucklin Point WWTF is contiguous to the tunnel launch shaft site and material can be hauled to the Bucklin Point WWTF based on the permitted hours for trucking in accordance with contract requirements and local ordinances.
- Reduce the wear and tear on local roads around the site by minimizing the distance traveled to haul the material off site.
- Provide final grades that support potential future site uses. No future uses have been decided on at this time, but options under consideration include passive recreation and renewable energy (e.g., ground mounted solar).

Please note that a prior CRMC Assent 1990-09-015 (Relocation of 120,000 cubic yards of sludge/gravel from north landfill to south landfill, and removal of 140,000 cubic yards of sludge/gravel to central landfill) stipulation K required the Blackstone Valley District Commission perform an assessment of the feasibility of providing public access to the South Landfill site following its stabilization. Correspondences with the design consultant regarding this matter has provided the following:

*“Additional file information that NBC was able to locate indicates that a boat ramp was under consideration by the Blackstone Valley District Commission. It is unclear how serious this was considered, but it appears a consultant working on BVDC's behalf discussed it with US Army Corps personnel. A letter from this*

*consultant to BVDC suggested that a boat ramp would be incompatible with the South Landfill for a number of reasons, most notably the integrity of the slag berm around the site. It does not appear this letter was submitted to CRMC or other agencies because the boat ramp project did not move forward. NBC is not aware of any other feasibility study having been carried out to assess other, more passive forms of public access to the South Landfill. It is possible that the Blackstone Valley District Commission performed additional evaluations prior to NBC overtaking their operations, but we have not come across any additional records. Regardless, public access to the South Landfill isn't reasonably feasible because access points to the site would need to cross through operational areas of the treatment plant, over an active rail line, or through private property. Public access to the South Landfill is not proposed as part of the planned site filling and grading project under CRMC review”.*

Based on the above, particularly site constraints, there is no objections to the lack of public access at the landfill.

#### **COMMENTS ON APPLICATION/APPLICABLE POLICIES, STANDARDS & ETC:**

##### **Filling, Removing and Grading of Shoreline Features (§1.3.1(B)(1)(f)):**

The project is being heard by the full council because a Category B hearing is required when: “(1) The filling or removing involves more than ten thousand (10,000) cubic yards of material; (2) The affected area is greater than two acres...”. The project proposes both of these.

New slopes will have maximum slope of 3H:1V except in select areas where steeper slopes are required to tie new work into existing grades. Steeper slopes up to 2H:1V will be stabilized with R-4 riprap (6” – 12” stone size); otherwise, gabion retaining walls are proposed where required to meet existing grades. All new slopes will be seeded with native grass or wildflower mix, as specified on the drawings, to reestablish vegetation and stabilize the slopes to prevent erosion. Existing steep slopes that currently have deep rooting vegetation are proposed to remain undisturbed, particularly on the river side of the site.

A slope stability analysis has been performed using proprietary software (SLOPE/W 2021 R2) and the model indicates that the proposed slopes for the South landfill meet or exceed the minimum factor safety of 1.3 to 1.5. The proposed slopes for the North landfill also meet the minimum Factor of Safety. Based on the submitted analysis, it appears there will not be slope failures due to this additional fill proposed.

It is the CRMC engineer’s opinion that the project meets or exceeds the standards set forth in this section.

##### **Setbacks (§1.1.9(B)(1)):**

A variance to 50’ setback is required for an approximately 80 linear foot where fill is proposed approximately 30’ from the coastal feature section of the North Landfill. Considering the small variance required in relation to the total length of shoreline at the site, there are no objections to the granting of this variance.

##### **Treatment of Sewage and Stormwater (§1.3.1(F)):**

Stormwater improvements are proposed for the North Landfill to capture stormwater runoff. Drainage swales are proposed alongside the existing paved and gravel access roads where none exist now at the North Landfill. Diversion benches are proposed along portions of the eastern side slope of the landfill to collect runoff before it potentially reaches erosive velocities. These will discharge to a new drainage infrastructure that connects into the existing closed drainage system. Stormwater is proposed to be managed

by collecting it in riprap swales. These swales will discharge toward the Seekonk River at two new outfall locations, as shown on the drawings.

A new gravel access road is proposed on the top of the South Landfill. The road is only approximately 5000 sf and represents a negligible increase in impervious area. Also, the road will be mostly utilized for maintenance activity (periodic use) and site conditions would require significant piping to treat runoff. Importantly, it would likely be difficult to site stormwater BMPs outside of filled areas given the history of the site. Based on the above, there are no objections to the absence of a BMP to treat stormwater from the new gravel access road.

Stormwater conveyances such as drainage swales and diversion benches have been sized for the expected rainfall events. The site will be covered with a permeable layer of clean soil to further promote groundwater recharge. A SESC Plan (Minimum Standard 10) and Stormwater Management System Operation and Maintenance (O&M) Plan (Minimum Standard 11) have been prepared and are included with this application package. Because the project does not represent a change in use of either site, existing conditions and the site will primarily be restored with a pervious layer of loam and seed, it has been determined that treatment of the water quality volume is not required.

In general, the stormwater controls that are proposed are an improvement from the existing condition and therefore there are no objections to the proposed stormwater treatment system. Please note this approach to stormwater control at both landfill sites is consistent with discussions held during our pre-application meeting with RIDEM.

**Climate Change and Sea Level Rise (§1.1.10):**

CRMC Staff and the design consultant reviewed the potential sea level rise scenario utilizing Stormtools online mapping tools in accordance with Redbook requirements regarding Climate Change and Sea Level Rise. The project is located on an undeveloped area and there are little alternatives for placing the project in a different location and still achieve project goals. The applicant has chosen a 50-year design life for a 5.15' sea level rise (year 2070) for analysis. Based on Stormtools, existing access to site at the South Landfill may be inundated only be in a 100 year storm event. It should be noted that this access is only required for periodic maintenance. At the North Landfill existing access at shoreward side of landfill may be inundated, but this is outside project limit of disturbance.

**Freshwater Wetlands in the Vicinity of the Coast (FWWIVC/§1.1.4(D))**

In addition to the Coastal Features/Coastal Wetlands identified on site, there are two areas of isolated Freshwater Wetlands in the northern landfill area, both located inland of the existing roadway access to the two landfill areas. There are an additional two areas located within the southern landfill area

None of the identified wetlands will be altered by the proposed project. The fill slopes on the southern landfill will be quite close to the wetlands, especially in the area of flags D13-D15 of the emergent plant community. The roadway access improvements are quite close to the forested wetland identified as the "C" series. Prior to start of work, construction methodology with details on protecting these wetlands shall be required.

It should be noted that no new discharges, increase flow or flowrates will be directed towards the existing freshwater wetlands.

**COMMENTS ON VARIANCE REQUEST:**

The project requires a variance to the 50' minimum construction setback for various portions of the proposed work, however, staff recommends approval of this setback as it appears the minimum necessary to provide environmental benefits in this heavily constrained location. This setback area will be allowed to revegetate to Buffer Zone, and may, in the future be utilized for public access.

**COMMENTS ON PUBLIC CORRESPONDENCE:**

During the public notice period, one correspondence was received. This correspondence was not an objection, but rather a series of questions about the project and were responded to by Brandon Blanchard, one of the project design engineers. The questions were in regard to adding material to the landfills, creating walls and the location of the Pawtucket Tunnel.

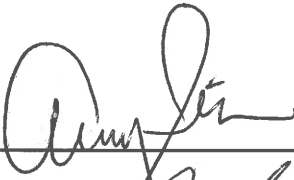

The correspondence is included in the Agenda Package.

**CONCLUSION, RECOMMENDATION & RECOMMENDED STIPULATIONS:**

The above described project appears to have minimal impact on coastal processes. There are no staff objections to Council approval of this project this project. Staff offers the following stipulations specific to this proposal:

(AS) A conservation grass seed mixture approved by the CRMC biologist shall be used to seed the South Landfill. Furthermore, a row of tree saplings and shrubs shall be planted along the shoreline to act as a seed source for regrowth of the buffer zone, with the species planted approved by CRMC biologist.

(AS) Prior to start of construction the applicant and/or contractor shall provide CRMC with construction methodology for the southern landfill, specifically detailing protection measures for the emergent plant community identified by flag series "D" and the forested wetland identified as the "C" Series.

Signed  \_\_\_\_\_ Staff Biologist  
Signed  \_\_\_\_\_ Staff Engineer