

# KEOUGH + SWEENEY, LTD.

ATTORNEYS AND COUNSELORS AT LAW  
41 MENDON AVENUE  
PAWTUCKET, RHODE ISLAND 02861  
**TELEPHONE** (401) 724-3600  
**FACSIMILE** (401) 724-9909  
www.keoughsweeney.com

RAYNHAM OFFICE:  
90 NEW STATE HIGHWAY  
RAYNHAM, MA 02109  
TEL. (508) 822-2813  
FAX (508) 822-2832

**JOSEPH A. KEOUGH JR.\***  
**JEROME V. SWEENEY III\***

**SEAN P. KEOUGH\***

**JEROME V. SWEENEY II**  
**OF COUNSEL**

\*ADMITTED TO PRACTICE IN  
RHODE ISLAND & MASSACHUSETTS

BOSTON OFFICE:  
171 MILK STREET  
SUITE 30  
BOSTON, MA 02109  
TEL. (617) 574-0054  
FAX (617) 451-1914

October 30, 2018

Ms. Luly Massaro, Clerk  
Rhode Island Public Utilities Commission  
89 Jefferson Boulevard  
Warwick, RI 02888

**Re:    *Docket No. 4885- The Narragansett Bay Commission***  
***Debt Service Compliance Filing***

Dear Ms. Massaro:

Enclosed please find an original and nine copies of the following document:

1. The Narragansett Bay Commission's response to the Rhode Island Public Utility Commission's Data Requests (Set One).

Please note that an electronic copy of this document has been provided to the service list.

Thank you for your attention to this matter.

Sincerely,



Joseph A. Keough, Jr.

JAK/kf

cc:    Docket 4885 Service List (*via electronic mail*)

STATE OF RHODE ISLAND  
PUBLIC UTILITIES COMMISSION  
DOCKET NO. 4885  
Response Of The  
Narragansett Bay Commission  
To The Rhode Island  
Public Utilities Commission's  
Data Requests  
Set 1

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**Comm. 1-1:** Please provide a copy of the reevaluation and optimization plan approved by the Department of Environmental Management (RIDEM) in December 2017 along with the renegotiated Consent Agreement.

**Response:** The renegotiated Consent Agreement is attached. The CSO Control Facilities Phase III Amended Reevaluation Report Volume 1 & 2 reports are 1,238 pages combined; therefore, NBC has also provided the Commission with a thumb drive containing electronic copies and both reports can be found at the NBC's website at:

<https://www.narrabay.com/en/ProgramsAndProjects/Combined%20Sewer%20Overflow%20Project/CSO%20Phase%20III.aspx>

**Prepared by:** Kathryn Kelly

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS  
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES

IN RE: Narragansett Bay Commission  
AAD Nos. 17-001/WRA & 17-002/WRA

Permit Nos.: RI0100072 &  
RI0100315

CONSENT AGREEMENT RIA-424

This Consent Agreement (the "Agreement") is entered into by and between the Department of Environmental Management (the "DEM") and the Narragansett Bay Commission (the "Respondent" or the "NBC"), which is responsible for the operation and maintenance of the Field's Point Wastewater Treatment Facility (the "FPWWTF"), located in Providence, Rhode Island, and the Bucklin Point Wastewater Treatment Facility (the "BPWWTF"), located in East Providence, Rhode Island, and their associated sewer systems. This Agreement is entered into in accordance with Chapters 46-12 and 42-17.1 of the Rhode Island General Laws ("RIGL").

On September 29, 2017, the DEM issued final Rhode Island Pollutant Discharge Elimination System ("RIPDES") permits to each of the two facilities operated by NBC. Permit RI0100072 was issued to the BPWWTF and Permit RI0100315 was issued to the FPWWTF (the "Final Permits"). In separate letters dated October 26, 2017, NBC requested an administrative adjudicatory hearing and moved to stay certain conditions set forth in the Final Permits. In a letter dated November 22, 2017 DEM granted in part and denied in part NBC's request to stay the contested permit conditions. In a letter dated December 12, 2017 NBC requested a hearing on DEM's denial in part of its stay request. In an effort to resolve NBC's December 12, 2017 appeal of DEM's denial in part of its request for a stay of all contested permit conditions, to resolve NBC's October 26, 2017 appeal of certain permit conditions, and to allow settlement negotiations to continue, the DEM and NBC agreed to a Consent Order issued by the Hearing Officer on July 19, 2018. This Consent Order anticipated that NBC and DEM would enter into this Consent Agreement.

In lieu of convening an administrative adjudicatory hearing regarding the disputed permit conditions and in order to affect a timely and amicable resolution of NBC's appeal, DEM and NBC agree that it is in the best interest of the parties and in the public interest to resolve the issues raised by NBC's appeal, as follows:

1. The Respondent is subject to the provisions of Chapter 46-12 of the RIGL for purposes of this Agreement.
2. DEM has jurisdiction over the subject matter of this Agreement and has personal jurisdiction over the Respondent for purposes of this Agreement.
3. The provisions of this Agreement shall apply to and be binding upon the Respondent, its agents, servants, employees, successors and assigns, and all persons, firms and corporations acting under, through and for it.

4. The compliance with the terms of this Agreement does not relieve the Respondent from compliance with any other applicable laws or regulations administered by DEM or any other governmental entity. Execution of this Agreement is for the sole purpose of resolving AAD case numbers 17-001/WRA and 17-002/WRA with the exception of Parts I.C.5.i and I.D.3 of the Final Permits (which were previously withdrawn by the Hearing Officer's Consent Order dated July 19, 2018) and Part II(o) which remains unresolved. It does not in any way resolve any other compliance issues associated with the Final Permits. This Agreement shall not operate to shield the Respondent from liability arising from future activities, as of the date of execution of this Agreement.
5. Upon the determination by the Director of the DEM that there is an immediate threat to the public health or the environment, or upon the discovery of new information, the DEM reserves the right to order additional remedial action or other enforcement measures as provided by law or regulations.
6. The Director of the DEM may, for good cause shown, defer any of the compliance dates prescribed herein. In the event that the Respondent believes that good cause exists for extending any such dates, the Respondent may submit a written request to DEM for an extension at least seven (7) days prior to such deadline, together with a complete statement of the reasons why the Respondent believes that such an extension is justified. Any such request shall be subject to DEM review, modification, and approval. The Agreement may be amended by mutual agreement of the parties in writing. If DEM denies the Respondent's extension request, that decision is a final administrative decision of DEM, which may be appealed to Superior Court in accordance with RIGL 42-35-1 et seq.
7. In the event that the Respondent fails to comply with any of the schedules in paragraph 11, 12, 13, 15, and/or 16 of this Agreement it shall pay a stipulated penalty of one thousand dollars (\$1,000) a day for each and every day it remains in violation of the schedule except that DEM may, for good cause shown, defer or reduce such penalty. The payment of a stipulated penalty in accordance with this paragraph shall not preclude DEM from seeking any other appropriate remedy.
8. In the event the Respondent fails to comply with any of the interim limits of paragraph 10, 12, and/or 16 of this Agreement it may be subject to an administrative penalty as determined by the DEM in accordance with the Rules and Regulations for Assessment of Administrative Penalties. The payment of an administrative penalty in accordance with this paragraph shall not preclude DEM from seeking any other appropriate remedy.
9. This Agreement shall have the full force and effect of a final administrative adjudication, shall be deemed a final administrative

decision under the Administrative Procedures Act (RIGL Chapter 42-35) and shall be fully enforceable in the Superior Court of the State of Rhode Island.

10. Within thirty (30) days of the date of execution of this Agreement, the DEM shall initiate the permit modifications in *Attachments A and B* of this Agreement, which are attached hereto and incorporated herein. The BPWWTF permit modifications do not supersede the interim limits that are agreed to and specified in Paragraph 10(b) until such time as is specified in Paragraph 10(b). The Respondent agrees not to appeal the attached permit modifications.
  - (a) From the date of execution of this Agreement until the effective date of a final decision on the CBOD and TSS permit modification pursuant to Rule 46 of the RIPDES Regulations, the FPWWTF shall be subject to the May 1 - October 31 interim limits for CBOD and TSS at the FPWWTF specified in *Attachment C* of this Agreement, which is attached hereto and incorporated herein.
  - (b) From the date of execution of this Agreement until three (3) months after the completion of construction and initiation of operation of the selected BPWWTF treatment alternatives under Paragraph 11(b), the BPWWTF shall be subject to the May 1 - October 31 interim limits for CBOD and TSS at the BPWWTF specified in *Attachment D* of this Agreement, which is attached hereto and incorporated herein.
11. NBC shall complete a Bucklin Point hydraulic and treatment process capacity evaluation in accordance with the following schedule:
  - (a) By December 31, 2018, NBC shall submit a Facilities Plan Amendment ("FPA") that includes the results of the Bucklin Point hydraulic and treatment process capacity evaluation described in the July 3, 2017 letter from NBC to DEM (*Attachment E* of this Agreement, which is attached hereto and incorporated herein). The FPA shall recommend an alternative to comply with the effluent limitations for outfall 001 during sustained periods of tunnel dewatering and shall include a schedule for completing design, construction, and initiation of operation of the recommended alternative.
  - (b) Upon DEM approval of the FPA required under Paragraph 11(a), the NBC shall complete the design and construction and initiate operation of the selected alternative in accordance with the approved schedule.
12. NBC shall attain compliance with the Maximum Daily Total Residual Chlorine ("TRC") and Enterococci Treated Wet Weather Outfall effluent

limits from Part I.A.7 of the Field's Point permit and Part I.A.8 of the Bucklin Point permit in accordance with the following schedule:

- (a) By December 1, 2022 NBC shall submit a report summarizing the TRC and Enterococci data, the frequency of discharge, and the average volume discharged based on data collected under the Final Permits between January 1, 2019 and September 1, 2022.
  - (b) From the date of execution of this agreement until February 1, 2023 (which may be extended if DEM has not made a determination on the need to maintain these permit limits) the NBC shall be subject to the Maximum Daily interim limits for TRC and Enterococci at the FPWWTF and the BPWWTF from *Attachments F and G* of this Agreement, respectively, which are attached hereto and incorporated herein.
13. NBC shall attain compliance with the Combined Sewer Overflow ("CSO") permit conditions and the effluent limitations specified in Parts I.D.1.a of the Final Permits (with the exception of Parts I.D.1.a.ii.1-9) in accordance with the following schedule:
- (a) By June 30, 2020, NBC shall submit preliminary design plans, an outline of specifications, and an Order of Approval ("OA") application for Phases IIIA and IIIB of the CSO control plan approved in the November 2017 CSO Control Facilities Phase III Amended Reevaluation Report (the "Reevaluation Report").
  - (b) Within 18 months after DEM approval of the preliminary design plans from Paragraph 13(a), NBC shall submit final design plans and specifications and an OA application for Phases IIIA and IIIB of the CSO control plan approved in the Reevaluation Report. The final design shall include a detailed schedule for completion of construction and initiation of operation for Phase IIIA, not to exceed five (5) years.
  - (c) Upon DEM approval of the final design plans from paragraph 13(b), the NBC shall complete construction and initiate operation of the Phase IIIA CSO control facilities in accordance with the approved schedules.
  - (d) Within six (6) months after issuing the Notice to Proceed for the last construction contract for Phase IIIA, NBC shall evaluate financial conditions and will notify DEM whether it is appropriate to expedite construction of Phase IIIB. If appropriate and approved by the NBC Board of Commissioners, the notification shall include a proposed schedule for the completion of construction and initiation of operation for Phase IIIB and, upon DEM approval of the notification, NBC shall complete construction and initiate

operation of the Phase IIIB CSO control facilities in accordance with the approved schedule

- (c) Unless superseded by Paragraph 13(d), within 24 months after initiating operation of the Phase IIIA CSO control facilities, the NBC shall submit a report which details the results of an Integrated Planning Framework assessment of all regional Clean Water Act projects, an evaluation of water quality improvements achieved through Phase IIIA, and the affordability of the CSO program after completion of Phase IIIA construction. If the report recommends substantial changes to the Phase IIIB design approved in Paragraph 13(b). The report shall include final design plans and specifications and an OA application for the modified Phase IIIB design.
- (f) Within 30 months after DEM approval of the report from Paragraph 13(e) unless superseded by Paragraph 13(d), the NBC shall complete construction and initiate operation of Phase IIIB CSO control facilities.
- (g) Within 12 months after initiating operation of the Phase IIIB CSO control facilities under Paragraph 13(f) or within 66 months of initiating operation of the Phase IIIB CSO control facilities if construction was expedited under Paragraph 13(d), the NBC shall submit a report which details the results of an Integrated Planning Framework assessment of all regional Clean Water Act projects, an evaluation of water quality improvements achieved through Phase IIIB, and the affordability of the CSO program after completion of Phase IIIB construction.
- (h) Within 24 months after DEM approval of the report from Paragraph 13(g), NBC shall submit preliminary design plans, an outline of specifications, and an OA application for Phase IIIC. Preliminary design of Phase IIIC shall modify the conceptual design approved in the Reevaluation Report as necessary to meet the Federal Clean Water Act, USEPA CSO control policies and the Rhode Island Water Quality Regulations.
- (i) Within 18 months of DEM approval of the Phase IIIC preliminary design from Paragraph 13(h), NBC shall submit final design plans and specifications and an OA application for Phase IIIC of the CSO control plan approved in the Reevaluation Report. The final design shall include but not be limited to a detailed schedule for completion of construction and initiation of operation, not to exceed three (3) years.
- (j) Upon DEM approval of the Phase IIIC final design from Paragraph 13(i), NBC shall complete construction and initiate operation of

the Phase IIIC CSO control facilities in accordance with the approved schedules.

- (k) Within 24 months of DEM approval of the Phase IIIC final design from Paragraph 13(i), NBC shall submit preliminary design plans, an outline of specifications, and an OA application for Phase IIID. Preliminary design of Phase IIID shall modify the conceptual design approved in the Reevaluation Report as necessary to meet the Federal Clean Water Act, USEPA CSO control policies and the Rhode Island Water Quality Regulations.
  - (l) Within 12 months after DEM approval of the Phase IIID preliminary design from Paragraph 13(k), NBC shall submit final design plans and specifications and an OA application for Phase IIID. The final design shall include but not be limited to a detailed schedule for completion of construction and initiation of operation, not to exceed three (3) years.
  - (m) Upon DEM approval of the Phase IIID final design from Paragraph 13(l), NBC shall complete construction and initiate operation of Phase IIID CSO control facilities in accordance with the approved schedule.
14. All FPAs, reports, design plans, and OA applications submitted under paragraphs 11, 12, and 13 of this Agreement shall be subject to DEM review, modification, and approval in accordance with Paragraph 20. All OA applications shall, at a minimum, include preliminary or final plans (as necessary); the appropriate fee, technical specifications or outline of specifications (as necessary), and design calculations; a summary of all local and State approvals/permits that will be required; and a proposed schedule to obtain all required approvals and construct the recommended compliance alternative.
15. NBC shall submit semi-annual reports summarizing progress with the compliance schedules from Paragraph 13 to the DEM. These reports shall be due January 15<sup>th</sup> and July 15<sup>th</sup> of each year.
16. The Respondent shall attain compliance with the monthly average Total Nickel limit and the monthly average and daily maximum Total Copper limits as specified in Part I.A.4 of the BPWWTF Permit in accordance with the following schedule:
- (a) By December 1, 2022 NBC will submit to DEM for review and approval, a report summarizing the monthly average Total Nickel concentration data and the monthly average and daily maximum Total Copper concentration data collected under the Bucklin Point Permit Part I.A.4, between January 1, 2019 and September 1, 2022



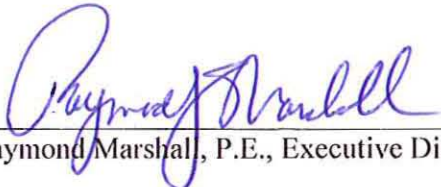
and an evaluation of the NBC's ability to comply with the final limits.

- (b) From the date of execution of this Agreement until February 1, 2023 (which may be extended if DEM has not made a determination on NBC's ability to comply with final limits), NBC shall meet the interim limitations for monthly average Total Nickel and monthly average and daily maximum Total Copper in *Attachment H* of this Agreement, which is attached hereto and incorporated herein.
17. The Respondent shall attain compliance with the web-based CSO notification requirements from Part I.D.4 of the Final Permits in accordance with the following schedule
- (a) Within thirty (30) days of the effective date of this Agreement, NBC and DEM will establish a working group to evaluate ways to improve communication of CSO overflows to the public including, but not limited to:
  - (b) By June 1, 2019, the NBC will submit, to DEM, an evaluation of the feasibility of a web-based public notification process to inform the public of when and where CSOs occur, including feasibility of a pilot area where such process could be tested.
  - (c) If implementation in a pilot area is deemed feasible, the workgroup shall evaluate implementation options.
  - (d) Within 90 days after the workgroup reviews implementation options, if any, NBC shall submit a plan and schedule for implementation within the pilot area.
  - (a) DEM shall provide written notification to NBC either granting approval or stating the deficiencies revealed in the feasibility study and implementation plan.
18. On the date of execution of this Agreement, the Respondent withdraws its appeals of the FPWWTF and BPWWTF Final Permits filed in AAD case numbers 17-001/WRA and 17-002/WRA, with the exception of Parts I.C.5.i and I.D.3 of the Final Permits (which were previously withdrawn by the Hearing Officer's Consent Order dated July 19, 2018) and Part II(o) which remains unresolved.
19. No later than fourteen (14) calendar days following a date identified in any schedule of compliance, the Respondent shall submit either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance. In the latter case, the

notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirements.

20. All reports and other documentation that the Respondent is required to submit to the DEM by the terms of this Agreement shall be sent to the Rhode Island Department of Environmental Management, RIPDES Program, 235 Promenade Street, Providence, RI 02908-5767. Each document shall be subject to DEM review and approval. Upon DEM review of the document, DEM shall provide written notification to the Respondent, either granting approval or stating the deficiencies revealed therein. DEM will provide NBC the opportunity to respond to any deficiencies; if DEM's final determination results in disapproval of the NBC's submittal, it will provide a written explanation of its findings; and NBC may appeal DEM's final decision to DEM's Administrative Adjudication Division. Within thirty (30) days (unless a longer time is specified) of receiving a notification of deficiencies, the Respondent shall submit to DEM either a response to the deficiencies or a revised document consistent with the DEM comments.
21. The Agreement may be amended only by mutual agreement of the parties in writing.
22. This Agreement supersedes Consent Agreement RIA-330.
23. This Agreement shall be deemed entered as of the date of execution by the parties.

Narragansett Bay Commission

  
Raymond Marshall, P.E., Executive Director

9/5/18  
Date


  
Vincent J. Mesolella, Chairman

09/05/18  
Date


The individuals signing on behalf of the Narragansett Bay Commission represent that they have the actual authority to enter into this Agreement, and the authority to bind the Narragansett Bay Commission to the requirements contained within.

In Providence, on the 5th day of  
September 2018, before me personally appeared Raymond Marshall, to me


known and known by me to be the party executing the foregoing Consent Agreement on behalf of the Narragansett Bay Commission and the acknowledged said instrument executed by them to be their free act and deed.

  
\_\_\_\_\_  
Notary Public  
My Commission expires: Jan. 20, 2021

In Providence, on the 5<sup>th</sup> day of  
September 2018, before me personally appeared Vincent J. Mesolella, to me known and known by me to be the party executing the foregoing Consent Agreement on behalf of the Narragansett Bay Commission and the acknowledged said instrument executed by them to be their free act and deed.

  
\_\_\_\_\_  
Notary Public  
My Commission expires: Jan. 20, 2021

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
FOR THE DIRECTOR

  
\_\_\_\_\_  
Angelo S. Liberti, P.E.  
Chief of Surface Water Protection  
Office of Water Resources

September 6, 2018  
Date

*Attachment A*

Permit No. RI0100315  
Modification Page 1 of 4

MODIFICATION

AUTHORIZATION TO DISCHARGE UNDER THE  
RHODE ISLAND POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of Chapter 46-12 of the Rhode Island General Laws, as amended, RIPDES Permit No. RI0100315 issued to the Narragansett Bay Commission on September 29, 2017 shall be modified as follows:

The corresponding May 1 – October 30 CBOD<sub>5</sub> and TSS limits from Part I.A.1 of the permit shall be replaced with the limits found in Attachment 1 of this modification. The TSS Monthly Average quantity and concentration limits and Weekly Average concentration limits shall remain as they are in the Final Permit.

The requirements from Part I.D.1.a.ii.6 of the permit shall be deleted and replaced with the following requirements:

*The permittee shall implement measures to control solid and floatable materials in CSOs. These measures shall include, but not be limited to, implementation by the NBC's Industrial Pretreatment Program of a litter educational effort for Significant Industrial Users as an element of the annual inspection process to educate these users about the importance of controlling the discharge of litter from their site to the combined sewer system as part of the SIU pretreatment inspections required under Part I.C of this permit.*

The requirements from Part I.D.2.a of the permit shall be deleted and replaced with the following requirements:

*The Permittee must implement the nine minimum controls contained in Part I.D.1.a.i and ii of this permit in accordance with the documentation approved by DEM. Compliance with the approved Nine Minimum Controls Plan shall be considered compliance with the portions of Parts I.D.1 and I.D.2 of this permit that relate to the implementation of the Nine Minimum Controls, with the exception of the prohibition against dry weather overflows from CSO outfalls contained in Part I.D.1a.ii.5 of this permit. This implementation must include the following controls:*

The requirements from Part I.E.4 of the permit shall be deleted and replaced with the following requirements:

*By December 1, 2019 the NBC shall submit a Resiliency Plan and schedule of short and long term actions that will be taken to maintain operation and protect key collection and treatment system assets. The plan shall be consistent with the DEM's Guidance for the Consideration of Climate Change Impacts in the Planning and Design of Municipal Wastewater Collection and Treatment Infrastructure and include consideration of the findings of the 2017 DEM report Implications of Climate Change for Rhode Island Wastewater Collection and Treatment Infrastructure. The Resiliency Plan shall include, but not be limited to: (i) an assessment of current and projected impacts from natural*

Permit No. RI0100315  
Modification Page 2 of 4

*hazards on critical components within the NBC collection and treatment systems, as well as on the systems themselves; (ii) a plan to adapt and protect vulnerable components and systems; (iii) an analysis that provides justification for selected adaptation methods. The analysis must consider component and system design life and sea-level rise projections. For the purposes of this Resiliency Plan, critical components are considered those necessary to ensure the forward flow and treatment of wastewater in accordance with the limits set forth in this permit. The Resiliency Plan shall also consider impacts on NBC from neighboring facilities during high hazard events. This Plan shall be subject to DEM review and approval. If DEM determines that modifications need to be made to the Plan, DEM shall notify the permittee in writing which elements of the Plan need to be modified and the reason for the needed modification. This notification shall include a schedule for making the changes. After such notification from the DEM, the permittee shall make changes to the Plan and submit the revisions to the DEM for their approval. NBC retains the right to continue to evaluate and modify the Resiliency Plan, including adaptation methods and the schedule for implementing the Resiliency Plan, after the date of submittal. Significant modifications to the Plan shall be subject to DEM review and approval, as indicated above.*

The permit shall be modified to include new Part I.I that includes the following requirements:

*Sample collection and analysis required under Part I.A is not required when the Governor of Rhode Island has declared a State of Emergency or during times that NBC has determined sample collection and analysis represents an unacceptable risk to its employees. NBC will perform additional sampling and analysis, during the same calendar month whenever feasible, for any parameters that are not required to be sampled and analyzed on a daily basis. In addition, NBC will analyze any daily samples that were automatically collected during the emergency event, although sample and analysis holding times and protocols may have been exceeded.*

The remaining effluent limitations, monitoring requirements and other conditions in the original permit are unchanged.

This modification shall become effective on \_\_\_\_\_.

This permit and the authorization to discharge expire at midnight, November 30, 2022.

This change modifies the permit issued on September 29, 2017.

Permit No. RI0100315  
Modification Page 3 of 4

This modification consists of four (4) pages.

Signed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

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Angelo S. Liberti, P.E., Chief of Surface Water Protection  
Office of Water Resources  
Rhode Island Department of Environmental Management  
Providence, Rhode Island

# ATTACHMENT 1

Permit No. RI0100315  
Modification Page 4 of 4

## PART I

### A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date and lasting through permit expiration, the permittee is authorized to discharge from outfall serial number 001A (Advanced Treatment Discharge After Disinfection).

Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>				<u>Monitoring Requirement</u>		
	Quantity - lbs./day		Concentration - specify units		Maximum	Measurement Frequency	Sample Type
	Average	Maximum	Average	Average			
	<u>Monthly</u>	<u>Daily</u>	<u>Monthly</u>	<u>Weekly</u>	<u>Daily</u>		
			*( <u>Minimum</u> )	*( <u>Average</u> )	*( <u>Maximum</u> )		
CBOD <sub>5</sub> (May 1 – Oct. 30)	10,842	16,263	20 mg/l	20 mg/l	30 mg/l	1/Day	24-Hr. Comp.
TSS (May 1 – Oct. 30)		24,395			45 mg/l	1/Day	24-Hr. Comp.

--- Signifies a parameter which must be monitored and data must be reported; no limit has been established at this time.

Sampling for TSS, CBOD<sub>5</sub>, Flow, and Settleable Solids shall be performed Sunday-Saturday. All CBOD<sub>5</sub> and TSS samples shall be taken on the influent and effluent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: Outfall 001A (Advanced Treatment Discharge After Disinfection).

Permit No. RI0100315  
Modification Fact Sheet  
Page 1 of 4

FACT SHEET

**RHODE ISLAND POLLUTANT DISCHARGE ELIMINATION SYSTEM (RIPDES) PERMIT TO  
DISCHARGE TO WATERS OF THE STATE**

**RIPDES PERMIT NO. RI0100315**

**NAME AND ADDRESS OF APPLICANT:**

**The Narragansett Bay Commission  
One Service Road  
Providence, RI 02905**

**NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:**

**Field's Point Wastewater Treatment Facility  
2 Ernest Street  
Providence, RI 02905 and  
associated Combined Sewer Overflows (CSOs)**

**RECEIVING WATER:**

**Providence River, Water Body ID# RI0007020E-01B (Field's Point WWTF)  
Seekonk River, Water Body ID# RI0007019E-01 (CSO Outfalls)  
Moshassuck River, Water Body ID# RI0003008R-01 (CSO Outfalls)  
West River, Water Body ID# RI0003008R-03C (CSO Outfalls) and  
Woonasquatucket River, Water Body ID#RI0002007R-10D (CSO Outfalls)**

**CLASSIFICATION: SB1 {a} (Providence and Seekonk Rivers); B1{a} (Woonasquatucket River)  
& B{a} (Moshassuck and West Rivers)**

**I. Proposed Action**

On September 29, 2017, the DEM issued a final RIPDES permit to this facility. In letters dated October 26, 2017, NBC requested an administrative adjudicatory hearing and moved to stay certain conditions set forth in the Final Permit. In lieu of convening an administrative adjudicatory hearing regarding the disputed permit conditions and in order to affect a timely and amicable resolution of NBC's appeal, DEM and NBC agreed to modify: certain May 1 – October 30 CBOD<sub>5</sub> and TSS limits from Part I.A.1 of the permit, Part I.D.1.a.ii.6 of the permit to clarify the solid and floatable materials control requirements for NBC's Industrial Pretreatment Program, Part I.D.2.a of the permit to clarify the NBC's requirements to implement the Nine Minimum Controls Plan approved by DEM, the deadline to submit a Resiliency Plan under Part I.E.4 of the permit, and include a new Part I.I that clarifies the sampling requirements during declared a States of Emergency or similar events when NBC has determined that sample collection and analysis represents an



Permit No. RI0100315  
Modification Fact Sheet  
Page 2 of 4

unacceptable risk to its employees. All other remaining effluent limitations, monitoring requirements, and other conditions in the original permit are unchanged.

## II. Permit Limitations and Conditions

### Facility Description

The Narragansett Bay Commission (NBC) owns and operates the Field's Point Wastewater Treatment Facility (WWTF) located on Ernest Street in Providence, Rhode Island and several associated Combined Sewer Overflows (CSOs). The Field's Point facility services the communities of Johnston, Providence, North Providence, and portions of Lincoln and Cranston. Specific details regarding the WWTF, CSOs, and its receiving waters can be found in the Fact Sheet to the permit that was issued on September 29, 2017.

### Proposed Permit Modifications

This modification changes certain May 1 – October 30 CBOD<sub>5</sub> and TSS limits from Part I.A.1 of the permit to the following limits:

Parameter	Quantity Limits		Concentration Limits		
	Monthly Ave	Daily Max	Monthly Ave	Weekly Ave	Daily Max
CBOD (May 1 – Oct 31)	10,842 lb/d	16,263 lb/d	20 mg/l	20 mg/l	30 mg/l
TSS (May 1 – Oct 31)		24,395 lb/d			45 mg/l

These concentration-based limits are set at levels more stringent than those required by 40 CFR 133.102 (a)-(c) and are based on BPJ due to increased pollutant removals that will be achieved from the WWTF's operation of nutrient removal equipment. In making the determination to assign these limits, DEM considered the factors identified in 40 C.F.R § 125.3(d), including the design influent flow and loading WWTF process modeling results that NBC submitted prior to DEM approval of the final design and during the public comment period on the draft RIPDES permit. Based upon a review of the NBC's historic data since the nutrient removal upgrades were placed on-line and the WWTF design calculations submitted by NBC it has been determined that the NBC can meet these new limits. The mass-based (i.e. lb/day) CBOD<sub>5</sub> and TSS limits were calculated using the above-mentioned concentration-based limits in mg/L, the WWTF's monthly average design flow in MGD, and the appropriate conversion factor of 8.34 lbs/gallon. Based upon a review of the NBC's historic data since the nutrient removal upgrades were placed on-line and the WWTF design calculations submitted by NBC it has been determined that the NBC can meet these new limits. Furthermore, under Consent Agreement No. RIA-424, NBC has agreed not to object to the establishment of these limits.

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The language from Part I.D.1.a.ii.6 of the permit has been modified to clarify the solids and floatables control measures that NBC shall implement by its Industrial Pretreatment Program. These measures consist of a litter educational effort for Significant Industrial Users as an element of the annual inspection process to educate these users about the importance of controlling the discharge of litter from their site to the combined sewer system.

The language from Part I.D.2.a of the permit has been modified to clarify that the nine minimum control measures that must be implemented by NBC are the measures included in the Nine Minimum Controls Plan that is approved by DEM.

The deadline to submit a Resiliency Plan under Part I.E.4 of the permit has been extended to December 1, 2019 and language has been added to this part of the permit clarifying that NBC retains the right to continue to evaluate and modify the Resiliency Plan and that significant modifications to the Plan shall be subject to DEM review and approval.

The permit is being modified to include a new Part I.I that clarifies that sample collection and analysis under Part I.A of the permit is not required when the Governor of Rhode Island has declared a State of Emergency or during times that NBC has determined sample collection and analysis represents an unacceptable risk to its employees. It also clarifies that NBC will perform additional sampling and analysis, during the same calendar month whenever feasible, for any parameters that are not required to be sampled and analyzed on a daily basis. In addition, NBC will analyze any daily samples that were automatically collected during the emergency event, although sample and analysis holding times and protocols may have been exceeded.

The remaining general and specific conditions of the permit are based on the RIPDES regulations as well as 40 CFR Parts 122 through 125 and remain unchanged.

### **III. Comment Period, Hearing Requests, and Procedures for Final Decisions**

All persons, including applicants, who believe any condition of the draft permit modification is inappropriate must raise all issues and submit all available arguments and all supporting material for their arguments in full by the close of the public comment period, to the Rhode Island Department of Environmental Management, Office of Water Resources, 235 Promenade Street, Providence, Rhode Island, 02908-5767. In accordance with Chapter 46-17.4 of the Rhode Island General Laws, a public hearing will be held prior to the close of the public comment period. In reaching a final decision on the draft permit the Director will respond to all significant comments and make these responses available to the public at DEM's Providence Office.

Following the close of the comment period, and after the public hearing, the Director will issue a final permit decision and forward a copy of the final decision to the applicant and each person who has submitted written comments, provided oral testimony, or requested notice. Within thirty (30) days following the notice of the final permit decision any interested person may submit a request

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Modification Fact Sheet  
Page 4 of 4

for a formal hearing to reconsider or contest the final decision. Requests for formal hearings must satisfy the requirements of Rule 49 of the Regulations for the Rhode Island Pollutant Discharge Elimination System.

#### IV. DEM Contact

Additional information concerning the permit may be obtained between the hours of 8:30 a.m. and 4:00p.m., Monday through Friday, excluding holidays from:

Joseph Haberek, P.E.  
Department of Environmental Management  
Office of Water Resources  
235 Promenade Street  
Providence, Rhode Island, 02908-5767  
Telephone: (401) 222-4700, ext: 7715  
joseph.haberek@dem.ri.gov

---

Date

---

Joseph B. Haberek, P.E.  
Supervising Sanitary Engineer  
Office of Water Resources  
Department of Environmental Management

*Attachment B*

Permit No. RI0100072  
Modification Page 1 of 4

MODIFICATION

AUTHORIZATION TO DISCHARGE UNDER THE  
RHODE ISLAND POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of Chapter 46-12 of the Rhode Island General Laws, as amended, RIPDES Permit No. RI0100072 issued to the Narragansett Bay Commission on September 29, 2017 shall be modified as follows:

The corresponding May 1 – October 30 CBOD<sub>5</sub> and TSS limits from Part I.A.1 of the permit shall be replaced with the limits found in Attachment 1 of this modification. The TSS Monthly Average quantity and concentration limits and Weekly Average concentration limits shall remain as they are in the Final Permit.

The requirements from Part I.D.1.a.ii.6 of the permit shall be deleted and replaced with the following requirements:

*The permittee shall implement measures to control solid and floatable materials in CSOs. These measures shall include, but not be limited to, implementation by the NBC's Industrial Pretreatment Program of a litter educational effort for Significant Industrial Users as an element of the annual inspection process to educate these users about the importance of controlling the discharge of litter from their site to the combined sewer system as part of the SIU pretreatment inspections required under Part I.C of this permit.*

The requirements from Part I.D.2.a of the permit shall be deleted and replaced with the following requirements:

*The Permittee must implement the nine minimum controls contained in Part I.D.1.a.i and ii of this permit in accordance with the documentation approved by DEM. Compliance with the approved Nine Minimum Controls Plan shall be considered compliance with the portions of Parts I.D.1 and I.D.2 of this permit that relate to the implementation of the Nine Minimum Controls, with the exception of the prohibition against dry weather overflows from CSO outfalls contained in Part I.D.1a.ii.5 of this permit. This implementation must include the following controls:*

The requirements from Part I.E.4 of the permit shall be deleted and replaced with the following requirements:

*By December 1, 2019 the NBC shall submit a Resiliency Plan and schedule of short and long term actions that will be taken to maintain operation and protect key collection and treatment system assets. The plan shall be consistent with the DEM's Guidance for the Consideration of Climate Change Impacts in the Planning and Design of Municipal Wastewater Collection and Treatment Infrastructure and include consideration of the findings of the 2017 DEM report Implications of Climate Change for Rhode Island Wastewater Collection and Treatment Infrastructure. The Resiliency Plan shall include, but not be limited to: (i) an assessment of current and projected impacts from natural*

Permit No. R10100072  
Modification Page 2 of 4

*hazards on critical components within the NBC collection and treatment systems, as well as on the systems themselves; (ii) a plan to adapt and protect vulnerable components and systems; (iii) an analysis that provides justification for selected adaptation methods. The analysis must consider component and system design life and sea-level rise projections. For the purposes of this Resiliency Plan, critical components are considered those necessary to ensure the forward flow and treatment of wastewater in accordance with the limits set forth in this permit. The Resiliency Plan shall also consider impacts on NBC from neighboring facilities during high hazard events. This Plan shall be subject to DEM review and approval. If DEM determines that modifications need to be made to the Plan, DEM shall notify the permittee in writing which elements of the Plan need to be modified and the reason for the needed modification. This notification shall include a schedule for making the changes. After such notification from the DEM, the permittee shall make changes to the Plan and submit the revisions to the DEM for their approval. NBC retains the right to continue to evaluate and modify the Resiliency Plan, including adaptation methods and the schedule for implementing the Resiliency Plan, after the date of submittal. Significant modifications to the Plan shall be subject to DEM review and approval, as indicated above.*

The permit shall be modified to include new Part I.I that includes the following requirements:

*Sample collection and analysis required under Part I.A is not required when the Governor of Rhode Island has declared a State of Emergency or during times that NBC has determined sample collection and analysis represents an unacceptable risk to its employees. NBC will perform additional sampling and analysis, during the same calendar month whenever feasible, for any parameters that are not required to be sampled and analyzed on a daily basis. In addition, NBC will analyze any daily samples that were automatically collected during the emergency event, although sample and analysis holding times and protocols may have been exceeded.*

Permit No. RI0100072  
Modification Page 3 of 4

The remaining effluent limitations, monitoring requirements and other conditions in the original permit are unchanged.

This modification shall become effective on \_\_\_\_\_.

This permit and the authorization to discharge expire at midnight, November 30, 2022.

This change modifies the permit issued on September 29, 2017.

This modification consists of four (4) pages.

Signed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

---

Angelo S. Liberti, P.E., Chief of Surface Water Protection  
Office of Water Resources  
Rhode Island Department of Environmental Management  
Providence, Rhode Island

# ATTACHMENT 1

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Modification Page 4 of 4

## PART I

### B. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

2. During the period beginning on the effective date and lasting through permit expiration, the permittee is authorized to discharge from outfall serial number 001A (Advanced Treatment Discharge After Disinfection).

Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>				<u>Monitoring Requirement</u>		
	Quantity - lbs./day		Concentration - specify units		Maximum	Measurement <u>Frequency</u>	Sample <u>Type</u>
	Average	Maximum	Average	Average			
	<u>Monthly</u>	<u>Daily</u>	<u>Monthly</u>	<u>Weekly</u>	<u>Daily</u>		
			*( <u>Minimum</u> )	*( <u>Average</u> )	*( <u>Maximum</u> )		
CBOD <sub>5</sub> (May 1 – Oct. 30)	5,171	7,756	20 mg/l	20 mg/l	30 mg/l	1/Day	24-Hr. Comp.
TSS (May 1 – Oct. 30)		11,634			45 mg/l	1/Day	24-Hr. Comp.

--- Signifies a parameter which must be monitored and data must be reported; no limit has been established at this time.

Sampling for TSS, CBOD<sub>5</sub>, Flow, and Settleable Solids shall be performed Sunday-Saturday. All CBOD<sub>5</sub> and TSS samples shall be taken on the influent and effluent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: Outfall 001A (Advanced Treatment Discharge After Disinfection).

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FACT SHEET

**RHODE ISLAND POLLUTANT DISCHARGE ELIMINATION SYSTEM (RIPDES) PERMIT TO  
DISCHARGE TO WATERS OF THE STATE**

**RIPDES PERMIT NO. RI0100072**

**NAME AND ADDRESS OF APPLICANT:**

**The Narragansett Bay Commission  
One Service Road  
Providence, RI 02905**

**NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:**

**Bucklin Point Wastewater Treatment Facility  
102 Campbell Avenue  
East Providence, Rhode Island  
and  
associated Combined Sewer Overflows (CSOs)**

**RECEIVING WATER:**

**Seekonk River (Water Body ID# RI0007019E-01) (Bucklin Point WWTF),  
Moshassuck River (Water Body ID# RI0003008R-01C) (CSO Outfalls), and  
Blackstone River (Water body ID# RI0001003R-01B) (CSO Outfalls)**

**CLASSIFICATION: SB1{a} (Seekonk River);B{a} (Moshassuck River);B1{a} (Blackstone River)**

**I. Proposed Action**

On September 29, 2017, the DEM issued a final RIPDES permit to this facility. In letters dated October 26, 2017, NBC requested an administrative adjudicatory hearing and moved to stay certain conditions set forth in the Final Permit. In lieu of convening an administrative adjudicatory hearing regarding the disputed permit conditions and in order to affect a timely and amicable resolution of NBC's appeal, DEM and NBC agreed to modify: certain May 1 – October 30 CBOD<sub>5</sub> and TSS limits from Part I.A.1 of the permit, Part I.D.1.a.ii.6 of the permit to clarify the solid and floatable materials control requirements for NBC's Industrial Pretreatment Program, Part I.D.2.a of the permit to clarify the NBC's requirements to implement the Nine Minimum Controls Plan approved by DEM, the deadline to submit a Resiliency Plan under Part I.E.4 of the permit, and include a new Part I.I that clarifies the sampling requirements during declared a States of Emergency or similar events when NBC has determined that sample collection and analysis represents an unacceptable risk to its employees. All other remaining effluent limitations, monitoring requirements, and other conditions in the original permit are unchanged.



Permit No. R10100072  
Modification Fact Sheet  
Page 2 of 4

## II. Permit Limitations and Conditions

### Facility Description

The Narragansett Bay Commission owns and operates the Bucklin Point Wastewater Treatment Facility (WWTF) located on Campbell Avenue in East Providence, Rhode Island and several associated Combined Sewer Overflows (CSOs). Although the Narragansett Bay Commission is responsible for the flows that discharge from the CSOs, the actual CSOs in the Bucklin Point service area are owned by the municipalities in which the CSOs are located. The Bucklin Point facility services the communities of Central Falls, Cumberland, Pawtucket, and portions of Lincoln, East Providence, and Smithfield. Specific details regarding the WWTF, CSOs, and its receiving waters can be found in the Fact Sheet to the permit that was issued on September 29, 2017.

### Proposed Permit Modifications

This modification changes the May 1 – October 30 CBOD<sub>5</sub> and TSS limits from Part I.A.1 of the permit to the following limits:

Parameter	Quantity Limits		Concentration Limits		
	Monthly Ave	Daily Max	Monthly Ave	Weekly Ave	Daily Max
CBOD (May 1 – Oct 31)	5,171 lb/d	7,756 lb/d	20 mg/l	20mg/l	30 mg/l
TSS (May 1 – Oct 31)		11,634 lb/d			45 mg/l

These concentration-based limits are set at levels more stringent than those required by 40 CFR 133.102 (a)-(c) and are based on BPJ due to increased pollutant removals that will be achieved from the WWTF's operation of nutrient removal equipment. In making the determination to assign these limits, DEM considered the factors identified in 40 C.F.R § 125.3(d) including and the design influent flow and loading WWTF process modeling results that NBC submitted prior to DEM approval of the final design and during the public comment period on the draft RIPDES permit. Based upon a review of the NBC's historic data since the nutrient removal upgrades were placed on-line and the WWTF design calculations submitted by NBC it has been determined that the NBC can meet these new limits. The mass-based (i.e. lb/day) CBOD<sub>5</sub> and TSS limits were calculated using the above-mentioned concentration-based limits in mg/L, the WWTF's monthly average design flow in MGD, and the appropriate conversion factor of 8.34 lbs/gallon. Based upon a review of the NBC's historic data since the nutrient removal upgrades were placed on-line and the WWTF design calculations submitted by NBC it has been determined that the NBC can meet these new limits. Furthermore, under Consent Agreement No. RIA-424, NBC has agreed not to object to the establishment of these limits.

The language from Part I.D.1.a.ii.6 of the permit has been modified to clarify the solids and floatables control measures that NBC shall implement by its Industrial Pretreatment Program.

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Modification Fact Sheet  
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These measures consist of a litter educational effort for Significant Industrial Users as an element of the annual inspection process to educate these users about the importance of controlling the discharge of litter from their site to the combined sewer system.

The language from Part I.D.2.a of the permit has been modified to clarify that the nine minimum control measures that must be implemented by NBC are the measures included in the Nine Minimum Controls Plan that is approved by DEM.

The deadline to submit a Resiliency Plan under Part I.E.4 of the permit has been extended to December 1, 2019 and language has been added to this part of the permit clarifying that NBC retains the right to continue to evaluate and modify the Resiliency Plan and that significant modifications to the Plan shall be subject to DEM review and approval.

The permit is being modified to include a new Part I.I that clarifies that sample collection and analysis under Part I.A of the permit is not required when the Governor of Rhode Island has declared a State of Emergency or during times that NBC has determined sample collection and analysis represents an unacceptable risk to its employees. It also clarifies that NBC will perform additional sampling and analysis, during the same calendar month whenever feasible, for any parameters that are not required to be sampled and analyzed on a daily basis. In addition, NBC will analyze any daily samples that were automatically collected during the emergency event, although sample and analysis holding times and protocols may have been exceeded.

The remaining general and specific conditions of the permit are based on the RIPDES regulations as well as 40 CFR Parts 122 through 125 and remain unchanged.

### **III. Comment Period, Hearing Requests, and Procedures for Final Decisions**

All persons, including applicants, who believe any condition of the draft permit modification is inappropriate must raise all issues and submit all available arguments and all supporting material for their arguments in full by the close of the public comment period, to the Rhode Island Department of Environmental Management, Office of Water Resources, 235 Promenade Street, Providence, Rhode Island, 02908-5767. In accordance with Chapter 46-17.4 of the Rhode Island General Laws, a public hearing will be held prior to the close of the public comment period. In reaching a final decision on the draft permit the Director will respond to all significant comments and make these responses available to the public at DEM's Providence Office.

Following the close of the comment period, and after the public hearing, the Director will issue a final permit decision and forward a copy of the final decision to the applicant and each person who has submitted written comments, provided oral testimony, or requested notice. Within thirty (30) days following the notice of the final permit decision any interested person may submit a request for a formal hearing to reconsider or contest the final decision. Requests for formal hearings must satisfy the requirements of Rule 49 of the Regulations for the Rhode Island Pollutant Discharge Elimination System.

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Modification Fact Sheet  
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**IV. DEM Contact**

Additional information concerning the permit may be obtained between the hours of 8:30 a.m. and 4:00p.m., Monday through Friday, excluding holidays from:

Joseph Haberek, P.E.  
Department of Environmental Management  
Office of Water Resources  
235 Promenade Street  
Providence, Rhode Island, 02908-5767  
Telephone: (401) 222-4700, ext: 7715  
joseph.haberek@dem.ri.gov

\_\_\_\_\_  
Date

\_\_\_\_\_  
Joseph B. Haberek, P.E.  
Supervising Sanitary Engineer  
Office of Water Resources  
Department of Environmental Management

## ATTACHMENT C

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### PART I

#### C. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

3. During the period beginning on the effective date of Consent Agreement RIA-424 and lasting through completion of Paragraph 10.a of RIA-424, the permittee is authorized to discharge from outfall serial number(s) 001A (Advanced Treatment Discharge After Disinfection). Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>					<u>Monitoring Requirement</u>	
	<u>Quantity - lbs./day</u>		<u>Concentration - specify units</u>			<u>Measurement Frequency</u>	<u>Sample Type</u>
	<u>Average Monthly</u>	<u>Maximum Daily</u>	<u>Average Monthly</u> *( <u>Minimum</u> )	<u>Average Weekly</u> *( <u>Average</u> )	<u>Maximum Daily</u> *( <u>Maximum</u> )		
CBOD <sub>5</sub> (May 1 – Oct. 30)	13,553	28,898	25 mg/l	40 mg/l	45 mg/l	1/Day	24-Hr. Comp.
TSS (May 1 – Oct. 30)	16,263	32,109	30 mg/l	45 mg/l	50 mg/l	1/Day	24-Hr. Comp.

--- Signifies a parameter which must be monitored and data must be reported; no limit has been established at this time.

Sampling for TSS, CBOD<sub>5</sub>, Flow, and Settleable Solids shall be performed Sunday-Saturday. All CBOD<sub>5</sub> and TSS samples shall be taken on the influent and effluent.

<sup>1</sup>Flow to the WWTF's headworks shall be reported. All flows received at the headworks shall receive at least primary treatment and disinfection. Up to 77 MGD must receive advanced treatment. Flows greater than 77 MGD shall be diverted to the wet weather treatment facility – Outfall 002A.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: Outfall 001A (Advanced Treatment Discharge After Disinfection).

ATTACHMENT D

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PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

- During the period beginning on the effective date of Consent Agreement RIA-424 and lasting through completion of Paragraph 10.b of RIA-424, the permittee is authorized to discharge from outfall serial number(s) 001A (Advanced Treatment Discharge After Disinfection).

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations					Monitoring Requirement	
	Quantity - lbs./day		Concentration - specify units			Measurement Frequency	Sample Type
	Average	Maximum	Average	Average	Maximum		
	<u>Monthly</u>	<u>Daily</u>	<u>Monthly</u>	<u>Weekly</u>	<u>Daily</u>		
CBOD <sub>5</sub> (May 1 – Oct. 31)	6,464	17,264	25 mg/l <i>*(Minimum)</i>	40 mg/l <i>*(Average)</i>	45 mg/l <i>*(Maximum)</i>	1/Day	24-Hr. Comp.
TSS (May 1 – Oct. 31)	7,756	19,182	30 mg/l	45 mg/l	50 mg/l	1/Day	24-Hr. Comp.

--- Signifies a parameter which must be monitored and data must be reported; no limit has been established at this time.

Sampling for TSS, CBOD<sub>5</sub>, Flow, and Settleable Solids shall be performed Sunday-Saturday. All CBOD<sub>5</sub> and TSS samples shall be taken on the influent and effluent with appropriate allowances for hydraulic detention (flow-through) time.

<sup>1</sup>Flow to the WWTF's headworks shall be reported. All flows up to 116 MGD shall receive at least primary treatment and disinfection. Up to 46 MGD must receive advanced treatment.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: Outfall 001A (Advanced Treatment Discharge after Disinfection).

**Attachment E: Copy of July 3, 2017 letter from NBC to DEM**

The Narragansett Bay Commission  
One Service Road  
Providence, RI 02905  
401 • 461•8848  
401 • 461•6540 Fax  
TTY (RI RELAY OPERATOR) 711

<http://www.narrabay.com>



Vincent J. Mesolella  
Chairman

Raymond J. Marshall, P.E.  
Executive Director

July 3, 2017

David E. Chopy, Chief  
DEM Office of Compliance and Inspection  
235 Promenade Street  
Providence, RI 2908

**RE: Executed Consent Agreement**  
**File Nos.: OCI-WP-14-95 and RIPDES RI0100072**

Dear Mr. Chopy:

Enclosed are two copies of the final report for the Bucklin Point stress test. An electronic version of this document was emailed to Bill Patenaude and Alex Pinto on May 31, 2017.

On July 26, 2016, the Rhode Island Department of Environmental Management (RIDEM) issued a Notice of Violation (NOV) in response to violations that occurred at the Bucklin Point Wastewater Treatment Facility (Facility) in 2013. A Consent Agreement (CA) for this NOV was executed on August 9, 2016. Section B(9) of the CA states that a scope of work to complete a stress test of the Facility (the "Stress Test") was submitted to RIDEM on May 12, 2016. Section B(11) of the CA states that the Stress Test would satisfy the Order section of the NOV.

The scope of work for the stress test included an evaluation of the secondary clarifiers to determine the actual operational efficiency and capacity during periods of high flow and an evaluation of the return activated sludge (RAS) and mixed liquor flow splitting systems. The stress test was conducted during the months of November and December 2016. The findings of the stress test indicate that, at a peak secondary flow rate of 46 MGD, the final clarifiers are operating at the limits of their capacity with 6 clarifiers in operation and beyond their capacity with 5 clarifiers in operation; the RAS pumps have an actual firm capacity of 19 MGD, and there is an uneven distribution of mixed liquor at the Facility.

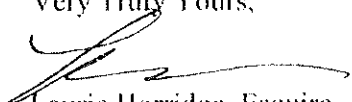
NBC has started to implement recommendations presented in Section 8.2 of the final report. Operations staff have begun to slowly lower the MLSS concentration and have been adjusting the butterfly valves to better balance the mixed liquor flows to the final clarifiers. They continue to treat flows with polymer during periods of high flow to improve settleability.

NBC will continue to evaluate the hydraulic and treatment process capacity at Bucklin Point and is in the process of entering into an Agreement with Stantec Consulting Services to perform the following activities over the next 9-12 months:

- Develop plant hydraulic model as an extension of the BPSA model using Infoworks ICM to determine hydraulic conditions and physical throughput limitations. Identify opportunities to enhance flow throughput through existing flow “bottlenecks”.
- Review inlet pump arrangement, by-pass, CSO, storm tank, flow to full treatment (FFT), etc.
- Evaluate existing treatment units firm capacity (e.g. “n+1” bar screen capacity, pumps), and opportunities to enhance firm hydraulic capacity/throughput.
- Use NBC’s existing BLOWIN model and the results of the recently completed full scale BPWWTF stress test to perform an analysis of the BPWWTF performance with the tunnel dewatering pump station in operation. Operating procedures will also be reviewed to determine if further optimization of wet weather performance can be developed.
- Analyze clarifier configuration and performance using CFD modelling to evaluate flow splits, internal short circuiting, and other issues related to clarifier performance, including identifying cost effective improvements to correct these issues.
- Create up to three (3) alternatives for increasing conveyance to BPWWTF to reduce CSO overflows and maintain permit limits for secondary treatment for sustained periods during tunnel dewatering. These alternatives may include evaluation of solids management alternatives at higher flows, including biosolids storage in existing and/or potential new tankage, evaluation of additional clarifiers to allow higher flow rates, addition of polymer to improve solids settling characteristics during wet weather, and other operational techniques and engineering options that could improve secondary treatment capacity and/or improve performance at existing peak flows.

Should you have any questions or comments, please feel free to contact me at 461-8848 x331 or Paul Nordstrom at 461-8848 x332.

Very Truly Yours,



Laurie Horridge, Esquire  
*Director of Executive Affairs  
& General Counsel*

Copy: Ray Marshall, P.E.-NBC  
Paul Nordstrom, P.E.-NBC  
Kathryn Kelly, P.E.-NBC  
Marc Pariseault - NBC

# ATTACHMENT F

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## PART 1

### A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

7. During the period beginning on the effective date of Consent Agreement RIA-424 and lasting through completion of Paragraph 12 of RIA-424, the permittee is authorized to discharge from outfall serial number(s) 002A (Treated Wet Weather Outfall – South Channel). Such discharges shall be monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Concentration - specify units</u>			<u>Monitoring Requirement</u>	
	Quantity - lbs./day						
	Monthly	Maximum	Monthly	Weekly	Maximum	Measurement	Sample
	<u>Average</u>	<u>Daily</u>	<u>Average</u>	<u>Average</u>	<u>Daily</u>	<u>Frequency</u>	<u>Type</u>
			*(Minimum)	*(Average)	*(Maximum)		
Enterococci <sup>1</sup>			— cfu 100 mL		— cfu 100 mL	When in Use <sup>2</sup>	Grab <sup>3,4</sup>
Total Residual Chlorine (TRC) <sup>1,5</sup>			— ug/l <sup>6</sup>		— ug/l <sup>6</sup>	When in Use <sup>2</sup>	Grab <sup>4</sup>

<sup>1</sup>The TRC, Fecal Coliform, and Enterococci samples shall be taken at the same time.

<sup>2</sup>For monitoring purposes, an overflow is defined as any occurrence of a discharge from the wet weather facility with a minimum duration of 15 minutes. Overflows shall be considered to be separate if they are separated by six (6) hours or more. During months of no overflow, DMR's shall be marked as "no discharge". All wet weather overflows created by storm events that are greater than the one year six hour storm (2.4 inches) are not subject to these limitations and should not be included in DMR reporting calculations. However, any wet weather overflow, regardless of the size of the storm event, must be reported to the DEM's Operations and Maintenance Program.

<sup>3</sup>The Geometric Mean shall be used to obtain the "monthly average", "weekly average", and "daily maximum" (when there are multiple samples taken in a given day) fecal coliform and enterococci results. Sampling for treated wet weather overflows taken between the hours of 2:30AM - 3:00PM on weekdays and during the hours of 2:30AM -11:00AM on weekends/holidays shall be reported on Discharge Monitoring Reports. Sampling at all times shall be reported on Monthly Operating Reports.

<sup>4</sup>One grab sample shall be taken per day of each overflow event. If an overflow event lasts longer than 24 hours, a grab sample shall be taken for each 24-hour period of the event.

<sup>5</sup>At each sampling event, one TRC sample shall be taken after chlorination but prior to dechlorination to verify that the wet weather flow has been properly chlorinated and one TRC sample shall be taken after dechlorination to verify that the wet weather flow has been properly dechlorinated. The sample after dechlorination shall be reported on DMR's.

<sup>6</sup>The following methods may be used to analyze the grab samples: (1) Low Level Amperometric Titration, Standard Methods (18<sup>th</sup> Edition) No. 4500-Cl E; (2) DPD Spectrophotometric, EPA No. 330.5 or Standard Methods (18<sup>th</sup> Edition) No. 4500-Cl G.

— Signifies a parameter which must be monitored and data must be reported; no limit has been established at this time.

\*Values in parentheses () are to be reported as Minimum/Average/Maximum for the reporting period rather than Average Monthly/Average Weekly/Maximum Daily.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: Outfall 002A (Treated Wet Weather Outfall – South Channel).



## ATTACHMENT G

Permit No. RI0100072

Page 9 of 33

## PART 1

## A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

8. During the period beginning on the effective date of Consent Agreement RIA-424 and lasting through completion of Paragraph 12 of RIA-424, the permittee is authorized to discharge from outfall serial number 003A (Treated Wet Weather Outfall After Dechlorination and Prior to Combination with the Advanced Treatment Discharge). Such discharges shall be monitored by the permittee as specified below:

Effluent Characteristic	Quantity - lbs./day		Discharge Limitations			Monitoring Requirement	
	Monthly Average	Maximum Daily	Concentration - specify units			Measurement Frequency	Sample Type
Enterococci <sup>1</sup>			Monthly Average	Weekly Average	Maximum Daily	When in Use <sup>2</sup>	Grab <sup>3,4</sup>
			--- cfu 100 mL		--- cfu 100 mL		
Total Residual Chlorine (TRC) <sup>1,5</sup>			--- ug/l <sup>6</sup>		--- ug/l <sup>6</sup>	When in Use <sup>2</sup>	Grab <sup>4</sup>

<sup>1</sup> The TRC, Fecal Coliform, and Enterococci samples shall be taken at the same time.

<sup>2</sup>For monitoring purposes, an overflow is defined as any occurrence of a discharge from the wet weather facility with a minimum duration of 15 minutes. Overflows shall be considered to be separate if they are separated by six (6) hours or more. During months of no overflow, DMR's shall be marked as "no discharge". All overflows created by storm events that are greater than the one year six hour storm (2.4 inches) are not subject to these limitations and should not be included in DMR reporting calculations. However, any overflow, regardless of the size of the storm event, must be reported to the DEM's Operations and Maintenance Program.

<sup>3</sup>The Geometric Mean shall be used to obtain the "monthly average", "weekly average", and "daily maximum" (when there are multiple samples taken in a given day) fecal coliform and enterococci results. Sampling for treated wet weather overflows taken between the hours of 2:30AM - 3:00PM on weekdays and during the hours of 2:30AM -11:00AM on weekends/holidays shall be reported on Discharge Monitoring Reports. Sampling at all times shall be reported on Monthly Operating Reports.

<sup>4</sup>One grab sample shall be taken per day of each overflow event. If an overflow event lasts longer than 24 hours, a grab sample shall be taken for each 24-hour period of the event.

<sup>5</sup>At each sampling event, one TRC sample shall be taken after chlorination but prior to dechlorination to verify that the wet weather flow has been properly chlorinated and one TRC sample shall be taken after dechlorination to verify that the wet weather flow has been properly dechlorinated. The sample after dechlorination shall be reported on DMR's.

<sup>6</sup>The following methods may be used to analyze the grab samples: (1) Low Level Amperometric Titration, Standard Methods (18<sup>th</sup> Edition) No. 4500-Cl E; (2) DPD Spectrophotometric, EPA No. 330.5 or Standard Methods (18<sup>th</sup> Edition) No. 4500-Cl G.

--- Signifies a parameter which must be monitored and data must be reported; no limit has been established at this time.

\*Values in parentheses () are to be reported as Minimum/Average/Maximum for the reporting period rather than Average Monthly/Average Weekly/Maximum Daily.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: Outfall 003A (Treated Wet Weather Outfall after Dechlorination and Prior to Combination with the Advanced Treatment Discharge).

## ATTACHMENT H

Permit No. RI0100072  
Page 5 of 33

### PART 1

#### A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

4. During the period beginning on the effective date of Consent Agreement RIA-424 and lasting through completion of Paragraph 16 of RIA-424, the permittee is authorized to discharge from outfall serial number 001A (Advanced Treatment Discharge After Disinfection). Such discharges shall be monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>			<u>Monitoring Requirement</u>	
	<u>Quantity - lbs./day</u>		<u>Concentration - specify units</u>		<u>Sample Type</u>
	<u>Monthly Average</u>	<u>Maximum Daily</u>	<u>Monthly Average</u>	<u>Weekly Average</u> <u>Maximum Daily</u>	<u>Measurement Frequency</u>
Copper, Total <sup>1</sup>			29.8 ug/l	86.1 ug/l	2/Week 24-Hr. Comp.
Nickel, Total <sup>1</sup>			25.0 ug/l	70.3 ug/l	2/Week 24-Hr. Comp.

--- Signifies a parameter which must be monitored and data must be reported; no limit has been established at this time.

<sup>1</sup> Samples shall be taken on the influent and effluent with appropriate allowances for hydraulic detention (flow-through) time.

Samples taken in compliance with the monitoring requirements specified above shall be taken Monday through Friday at the following locations:  
Outfall 001A (Advanced Treatment Discharge after Disinfection).

STATE OF RHODE ISLAND  
PUBLIC UTILITIES COMMISSION  
DOCKET NO. 4885  
Response Of The  
Narragansett Bay Commission  
To The Rhode Island  
Public Utilities Commission's  
Data Requests  
Set 1

**Comm. 1-2:** Regarding the projects that the proceeds of this loan will fund, please provide detail of each project, including:

- a. A description of the project;
- b. Start and completion dates (schedule);
- c. The amount of spending projected;
- d. Assumptions used in planning;
- e. Status of certificate of approval, if necessary.

**Response:** The table below indicates the primary projects that NBC has identified as being funded with proceeds from this loan.

**Prepared by:** David Bowen

Project Number	Project Name	Project Description	Schedule	Cost*	Funding Source	Planning Assumptions	Certificate of Approval
81000	BPWWTF UV Disinfection Improvements	This project involves the evaluation of the current Ultraviolet (UV) Disinfection system at Bucklin Point and implementation of a system replacement/upgrade. The current UV equipment is nearing the end of its useful life and the medium pressure, high intensity lamps are expensive and less efficient than newer technologies.	January 2018 - November 2021	\$ 4,766,000	SRF	Based on Engineer's Estimate	Projected application submittal May 2019
30457	Providence River Siphon	During the planning phase of this project, it was determined that the existing Providence River siphon was in good condition but that a section of the 78" interceptor needed to be replaced and that the inlet and outlet siphon chambers needed repair. These deficiencies will be corrected in the design and construction phases.	February 2018 - July 2019	\$ 7,118,756	SRF	Based on Engineer's Estimate	Received May 2018
30444	Moshassuck Valley Interceptor	An inspection of the Moshassuck Valley Interceptor from Higginson Street in Central Falls to Lockbridge Street in Pawtucket revealed that this line has sunk from its original grade at numerous points by as much as 2.5 feet. This project consists of design and construction of a new sewer to replace the existing sewer.	February 2018 - October 2019	\$ 9,403,198	SRF	Based on Engineering estimate	Received June 2018
30421	Louisquisset Pike Interceptor Improvements	This project involves the construction of a larger diameter interceptor in the northern section of the Town of Lincoln. The larger capacity pipe will accommodate the additional flow resulting from expected development.	February 2019 - August 2020	\$ 4,194,000	SRF	Based on planning	Projected application submittal April 2019
30800	CSO Phase III A Facilities	CSO Phase III is the third and final phase of NBC's federally mandated CSO Abatement Program. Phase III A involves the construction of a deep rock tunnel in Pawtucket approximately 13,000 feet in length along the Seekonk and Blackstone Rivers, a pump station to convey flow to the Bucklin Point WWTF in East Providence, drop shafts and consolidation conduits. Additionally, this project is to construct the Upper BVI relief, CSO 105 relief sewer, CSO 206 sewer separation, green stormwater infrastructure and regulator modifications. Lastly, this project is to construct O&M Support Facilities at Bucklin Point to maintain operational infrastructure necessary to provide space for construction of the tunnel pump station.	April 2013 - July 2026	\$ 470,760,283	SRF	Based on Stantec report	Received January 2018

\* Does not include costs for land and/or contingency, based on 7/1/2018 Cash Flows

STATE OF RHODE ISLAND  
PUBLIC UTILITIES COMMISSION  
DOCKET NO. 4885  
Response Of The  
Narragansett Bay Commission  
To The Rhode Island  
Public Utilities Commission's  
Data Requests  
Set 1

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**Comm. 1-3:** Please provide a copy of the 2019 Project Priority List from RIDEM and identify which projects have been completed and the cost of each project. Also include projects that have not yet been completed and the estimates of costs to complete.

**Response:** See attached and following table for NBC projects.

**Prepared by:** Rich Bernier

# RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

## Office of Water Resources

### Fiscal Year 2019 Project Priority List

Points	Category	Community	Project Name/Number	Cost (\$)
57	10	North Kingstown	NK Community Septic System Loan Program	\$ 300,000.00
56	10	Charlestown	Community ISDS Repair Program	\$ 600,000.00
54	10	South Kingstown	Community OWTS Repair Program	\$ 1,000,000.00
52	10	Tiverton	C-19-001 Community Septic System Repair Program	\$ 600,000.00
46	11	Narragansett	Narrow River Water Quality Improvement Project Phase IV	\$ 5,970,000.00
46	10	Foster	Community Septic System Loan Program	\$ 300,000.00
45	5	NBC	Phase III CSO Facilities - Dexter Street Parking Lot GSI	\$ 603,750.00
45	5	NBC	Phase III CSO Facilities - GSI Demonstration Project (1304 High Street)	\$ 3,622,500.00
42	10	Narragansett	ISDS Management Program	\$ 250,000.00
41	5	NBC	Phase III CSO Facilities - GSI Projects	\$ 8,331,750.00
40	5	NBC	Phase III CSO Facilities - 1304 High Street Demolition	\$ 450,760.00
40	5, 7	NBC	Phase III CSO Facilities - Design	\$ 74,000,000.00
40	11, 12	South Kingstown	TMDL Program Implementation	\$ 1,000,000.00
40	10, 4C	Warwick	Community Sewer Tie-in Loan Fund	\$ 150,000.00
37	10	New Shoreham	Community Septic System Loan Program (CSSLP)	\$ 300,000.00
37	11	South Kingstown	Phase II Stormwater Program Compliance	\$ 300,000.00
36	5	NBC	Phase III CSO Facilities - OF 205 Facilities	\$ 23,345,789.00
36	5	NBC	Phase III CSO Facilities - OF 218 Facilities	\$ 21,697,313.00
36	5	NBC	Phase III CSO Facilities - Phase B	\$ 28,500,000.00
36	5	NBC	Phase III CSO Facilities - Phase C	\$ 165,000,000.00
36	5	NBC	Phase III CSO Facilities - Phase D	\$ 83,500,000.00
36	5	NBC	Phase III CSO Facilities - BPWWTF Clarifiers and Flow Splitting	\$ 11,723,615.00
36	5	NBC	Phase III CSO Facilities - OF 217 Facilities	\$ 4,639,361.00
36	5	NBC	Phase III CSO Facilities - BPWWTF Polymer System	\$ 241,500.00
36	5	NBC	Phase III CSO Facilities - OF 210/213/214 Facilities	\$ 28,244,555.00
36	5	NBC	Phase III CSO Facilities - Regulator Modifications	\$ 1,628,765.00
36	5	NBC	Phase III CSO Facilities - Pawtucket Tunnel & Pump Station Cavern	\$ 261,454,784.00
36	5	NBC	Phase III CSO Facilities - Tunnel Pump Station Fit-out	\$ 63,427,555.00
36	10	Warwick	Community Septic System Loan Program	\$ 300,000.00
35	4C	Warwick	Strawberry Field Rd. Sewer Project II	\$ 1,000,000.00
33	4C, 4D	Warwick	Bayside Tidewater Interceptor & Lateral Sewers	\$ 22,000,000.00
32	11, 5	Pawtucket	Green Stormwater Infrastructure in TOD District	\$ 750,000.00
31	1	Cranston	Storm Drain Upgrades	\$ 1,000,000.00
31	4C, 10	Tiverton	C-19-002 Community Sewer Tie-in Program	\$ 300,000.00
31	4C	Tiverton	C-19-003 Riverside Dr., Robert Gray Area Wastewater Expansion	\$ 5,800,000.00
30	4C	Warwick	Greenwood East Sewer Project	\$ 14,800,000.00
30	4C	Warwick	Pilgrim Estates Sewer Project	\$ 4,800,000.00
30	4C	Warwick	Warwick Neck South Sewer Extension	\$ 13,400,000.00
29	11, 7	Central Falls	Higginson Ave - Storm sewer Improvements	\$ 1,000,000.00
29	8, 12	New Shoreham	Block Island Slope Stabilization	\$ 2,000,000.00
27	11	Cranston	TMDL Implementation	\$ 250,000.00

# RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

## Office of Water Resources

### Fiscal Year 2019 Project Priority List

27	1, 4D	North Kingstown	QDC Infrastructure Upgrades	\$ 5,000,000.00
27	4C	Warwick	East Natick III / O'Donnell Hill Sewer Extension	\$ 1,600,000.00
25	10	Smithfield	Community Septic System Repair Program	\$ 250,000.00
25	4C, 4D	South Kingstown	Upper Salt Pond Collection System	\$ 2,100,000.00
25	4C, 4D	South Kingstown	Saugatucket Pond (North Road) Sewers	\$ 2,300,000.00
25	4C	Tiverton	C-19-004 Hooper and Shove St. Sewer Extension Project	\$ 500,000.00
24	6	NBC	FPWWTF Facilities Plan Update	\$ 380,000.00
24	4D	North Kingstown	Newcomb Road Sewer Main Replacement	\$ 600,000.00
23	3A	Middletown	Program	\$ 100,000.00
23	6	NBC	NBC Energy Sustainability Project	\$ 225,000.00
23	4C, 4D	North Kingstown	Community Sewer Tie-in Program	\$ 300,000.00
23	4C, 4D	North Kingstown	Post Road North Sewers	\$ 6,600,000.00
23	4C	Warwick	Northwest Gorton Pond Sewer Project: WSA Contract #88	\$ 5,400,000.00
22	10	Cranston	Community ISDS Repair Program	\$ 200,000.00
21	5	NBC	WCSOI OF 046 Relief Structure	\$ 1,000,000.00
21	1	South Kingstown	SK Regional WWTF Septage Receiving Facilities	\$ 500,000.00
21	4D	South Kingstown	South Road Interceptor	\$ 1,700,000.00
21	1, 7	South Kingstown	SK Regional WWTF Process Upgrades	\$ 4,100,000.00
20	12, 1	Smithfield	Smithfield Facility Flood Resiliency	\$ 850,000.00
19	8	Barrington	Landfill Closure #4	\$ 2,000,000.00
19	1	Narragansett	Regional WWTF Process Upgrade	\$ 8,887,200.00
19	6	NBC	RIPDES Compliance Improvements	\$ 1,551,000.00
19	4C, 4D	South Kingstown	Curtis Corner Road Interceptor	\$ 2,200,000.00
19	4C	Warwick	Governor Francis Farms III Sewer Project: WSA Contract #85B	\$ 5,700,000.00
18	6	Barrington	Sewer System Evaluation Study	\$ 400,000.00
18	6	NBC	Greenhouse Gas Study	\$ 77,000.00
18	12, 3B	Smithfield	Smithfield Pump Stations Flood Resiliency	\$ 1,200,000.00
18	1	South Kingstown	Regional WWTF Solids Dewatering Upgrade	\$ 200,000.00
18	1	Warwick	Primary Clarifier Rehab.	\$ 100,000.00
17	1	Narragansett	Regional WWTF Hydraulic Expansion	\$ 5,564,160.00
17	10, 4C	New Shoreham	Community Sewer Tie-In Program	\$ 150,000.00
17	4C, 4D	North Kingstown	Shore Acres Wastewater Collection System	\$ 6,100,000.00
17	4C, 4D	North Kingstown	Wickford Village (W-1) Subarea Sewers	\$ 15,400,000.00
17	4C, 4D	North Kingstown	Wickford Village (W-2) Subarea Sewers	\$ 11,900,000.00
17	4C, 4D	North Kingstown	Wickford Village (W-3) Subarea Sewers	\$ 6,900,000.00
16	3B	NBC	Moshassuck Valley Interceptor Replacements	\$ 7,035,000.00
16	7	South Kingstown	SK Regional WWTF Phase II Hydraulic Extension	\$ 3,600,000.00
15	3B	Barrington	Princes Pond Pump Station Comminutor Modification	\$ 300,000.00
14	11	Cranston	Stormwater GIS - Maintenance/Asset Management	\$ 250,000.00
14	3, 7	NBC	Lincoln Septage Station Replacement	\$ 2,804,000.00
14	6, 3A	NBC	NBC Systemwide Inflow Reduction Program	\$ 455,000.00
14	3B	Newport	Sanitary Sewer Improvements IV	\$ 4,000,000.00

# RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

## Office of Water Resources

### Fiscal Year 2019 Project Priority List

14	3B	Newport	Sanitary Sewer Improvements V	\$ 4,000,000.00
13	1	Bristol	Replacement of Misc. Compost Equipment	\$ 300,000.00
13	1	Cranston	Cogeneration - WPCF	\$ 8,000,000.00
13	3A, 7	East Greenwich	Inflow/Infiltration Analysis	\$ 400,000.00
13	11, 12	East Greenwich	Sewer Jet/ Vac Truck	\$ 350,000.00
13	1	Narragansett	Scarborough WWTF Groin Rehabilitation Project	\$ 2,000,000.00
13	1	Narragansett	Scarborough Wastewater Treatment Facilities Upgrade.	\$ 8,237,000.00
13	1, 7	NBC	FPWWTF New Maintenance Facilities	\$ 6,478,000.00
13	1	NBC	WWTF Improvements	\$ 3,296,000.00
13	1	NBC	BPWWTF O&M Support Facilities	\$ 15,189,000.00
13	1, 7	NBC	IM Facilities	\$ 6,425,000.00
13	1	NBC	Facility Electrical Improvements	\$ 130,000.00
13	11	Newport	Tide Gates for Select Stormwater Outfalls	\$ 5,000,000.00
13	11	Newport	Flood Mitigation - Wellington Avenue	\$ 5,000,000.00
13	1	Warwick	Misc. Facility & Process Improvements	\$ 2,400,000.00
12	3B	Barrington	Legion Way Sewer Repair	\$ 500,000.00
12	3A	Cranston	Inflow & Infiltration Study Implementation	\$ 900,000.00
12	3B	Cranston	System Wide Sewer Repair	\$ 1,400,000.00
12	3B	Middletown	Sewer Main Upgrades (Newport/Middletown Line)	\$ 3,350,000.00
12	3B	NBC	NBC CSO Interceptors Rehabilitation	\$ 6,484,000.00
12	3B	NBC	Louisquisset Pike Interceptor Replacement	\$ 4,594,000.00
12	3B, 7	NBC	NBC Interceptor Easements	\$ 878,000.00
12	3B	NBC	Providence River Siphon Rehabilitation	\$ 6,922,000.00
12	3B	NBC	Inspection and Cleaning of CSO Interceptors	\$ 3,608,000.00
12	4D	North Kingstown	ASQAH Road Sewer Replacement	\$ 600,000.00
12	4C	Warwick	GAPS (Miscellaneous Sewer Extensions)	\$ 2,300,000.00
11	1	Bristol	WWTF RBCs & Misc. Improvements	\$ 1,900,000.00
11	1	East Greenwich	Wastewater Treatment Plant Upgrades	\$ 4,200,000.00
11	6	NBC	NBC System-Wide RIPDES Flow Monitoring	\$ 848,000.00
11	3B	NBC	Improvements to Interceptors - FY 2017	\$ 1,570,840.00
11	6	NBC	River Model Development	\$ 538,000.00
11	6	NBC	NBC System-Wide Facilities Planning	\$ 386,000.00
11	1	NBC	BPWWTF UV Disinfection Improvements	\$ 5,726,000.00
11	6	NBC	Municipal Sewer Acquisition Impact	\$ 296,000.00
11	3B	Newport	North End Sewer Reroute	\$ 6,000,000.00
11	3B	RIRRC	Pump Station #3 Retrofit Project	\$ 1,500,000.00
10	6	Barrington	GIS Software/equipment	\$ 20,000.00
10	3A, 6, 7	Bristol	Sewer System Repairs	\$ 50,000.00
10	6	Bristol	Inflow Source Removal	\$ 50,000.00
10	4C, 4D	Smithfield	Lower Sprague Reservoir Area - Indian Run Plat, Totem Pole Trail	\$ 5,000,000.00
10	4C	Smithfield	Richard St. and Hazel Point Sewers	\$ 565,000.00

**RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**  
**Office of Water Resources**  
**Fiscal Year 2019 Project Priority List**

10	4C, 4D	Smithfield	Levesque Dr, Jambray Dr. and Dongay Rd, Elna Dr, John Mowry Rd (North) and Brayton Rd. Sewers	\$ 3,450,000.00
10	4C	Smithfield	Highview and Hilldale Estates Sewers	\$ 3,775,000.00
10	4C	Smithfield	Green Lake Dr. and Russ Stone Dr. Sewers	\$ 855,000.00
10	4C	Smithfield	Friendship Ln., Domin Ave., Potter Ave. and Rawson Ave., Sydney St., Myers St., & Ridge Rd Sewers	\$ 1,000,000.00
10	4C	Smithfield	Fanning Lane Sewers	\$ 2,850,000.00
10	4C	Smithfield	Elmgrove Ave. (off Sanderson Rd.) Sewers	\$ 720,000.00
10	4C	Smithfield	North Candy Court Sewers	\$ 160,000.00
10	4C	Smithfield	Austin Ave, Mapleville Road / Colwell Road Sewers	\$ 2,420,000.00
10	4C	Smithfield	Cortland Ln, Baldwin Dr, Kimberly Ann Dr, Crabapple Lane and Christopher Dr. Sewers	\$ 1,500,000.00
10	3B	Smithfield	Improvements to Town's Pump Stations	\$ 320,000.00
10	3B	South Kingstown	Silver Lake/Kingston Pump Station Upgrades	\$ 500,000.00
9	3B	Cranston	Pump Station Safe Capacity Upgrades	\$ 1,400,000.00
9	1	Narragansett	Scarborough WWTF Headworks Building	\$ 2,000,000.00
9	2	Smithfield	Smithfield Treatment Plant Upgrades - HVAC	\$ 650,000.00
9	2	Smithfield	Upgrade WWTP's Fire Protection System	\$ 150,000.00
8	11	Newport	Marsh Street - Phase II Storm Drain	\$ 2,500,000.00
7	6	Barrington	I&I Study - Phase I	\$ 200,000.00
7	3B	NBC	Omega P.S. Upgrade	\$ 912,000.00
7	8	Smithfield	Landfill Closure (Ridge Road)	\$ 4,000,000.00
7	6, 3A	Smithfield	Smithfield Infiltration & In-Flow Removal - SSES	\$ 1,500,000.00
7	1, 7	Warwick	Sludge Dewatering Improvements	\$ 1,000,000.00
7	3B	Warwick	Cedar Swamp Force Main Replacement	\$ 250,000.00
6	3B	Middletown	Paradise P.S. Backup Generator Replacement	\$ 78,000.00
5	3B	Warwick	Airport Road Interceptor Rehabilitation	\$ 2,000,000.00
4	3B	NBC	NBC Easement Restoration - BVI Wetlands	\$ 194,000.00
4	3B, 7	Smithfield	Stillwater Interceptor Upgrade Project	\$ 1,250,000.00
4	3B	Warwick	Cedar Swamp Pump Station HVAC/Odor Control	\$ 650,000.00
4	3B	Warwick	Replacement of Air Ejector Pumping Stations	\$ 1,100,000.00

<b>Total</b>	<b>\$ 1,143,835,197.00</b>
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**RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**  
Office of Water Resources  
**Fiscal Year 2019 Project Priority List**

**Conduit Financing Only:**

Points	Category	Community	Project Name/Number	Cost (\$)
			<b>Total:</b>	\$ -

**Not Rated - Project Already Funded/Under Construction/Completed**

Points	Category	Community	Project Name/Number	Cost (\$)
*	8	Barrington	Landfill Closure #3	\$ 2,000,000.00
*	3A, 3B	Middletown	Upper Easton's Point Sewer Improvements	\$ 4,000,000.00
*	5	NBC	Phase II CSO Facilities - OF 106	\$ 5,518,088.00
*	5	NBC	Phase II CSO Facilities - WCSOI West	\$ 10,226,154.00
*	3B	NBC	Improvements to Interceptors - FY2015	\$ 1,218,160.00
*	1	NBC	FPWWTF Final Clarifiers Improvements	\$ 4,136,853.00
*	3B	NBC	Interceptor Easements - NBC BVI	\$ 1,281,713.00
*	2	NBC	FPWWTF Blower Improvements - Phase II	\$ 9,284,704.00
*	5	NBC	Floatables Control Facilities for CSO Outfalls	\$ 5,003,030.00
*	5	NBC	Phase II CSO Facilities Program Construction & Management*	\$ 19,981,855.00
*	1	NBC	BPWWTF Biogas Reuse Energy Project	\$ 8,271,641.00
*	5	NBC	Field's Point Tunnel Pump Station Improvements	\$ 988,783.00
*	1	NBC	Water Quality Science Building	\$ 21,906,348.00
*	3B	North Kingstown	Effluent Metering Chambers	\$ 450,000.00
*	4C, 4D	North Kingstown	Wickford Village Phase 1	\$ 4,100,000.00
			<b>Total:</b>	\$ 98,367,329.00

**Not Rated - Not Applicable**

Points	Category	Community	Project Name/Number	Cost (\$)

**Total:** \$ -

**Not Rated - Not Eligible**

Points	Category	Community	Project Name/Number	Cost (\$)

**Grand Total:** \$ 1,242,202,526.00

<u>CATEGORY</u>	<u>NUMBER</u>	<u>DEFINITION</u>
Secondary Treatment	1	Replacement/modifications/additions based on an approved Wastewater Facilities Plan (WWFP) to achieve/maintain secondary treatment
Advanced Treatment	2	Replacement/modifications/additions based on an approved WWFP to achieve/maintain advanced treatment
I/I Correction	3A	Corrective actions in sewer systems identified in an approved I/I Analysis or Sewer System Evaluation Survey
Sewer System Repair	3B	Rehabilitation is extensive repair of existing sewers/pump stations beyond scope of normal maintenance programs. Replacement is construction of parallel sewers/sewers with exact function of sewers to be abandoned. Replacement of pump stations is construction of a new pumping station with the same functions/flow capacity of the old facility. All must be in WWFP
Collectors (Future)	4A	Sewers that will convey flows from future homes, businesses and industries identified in a CCP and approved in a WWFP
Interceptor (Future)	4B	Sewers that will convey flows from one of more Category 4A areas to another interceptor or WWTF
Collectors (Present)	4C	Sewers to convey flows from present homes, businesses, and industries identified in a CCP and approved in a WWFP
Interceptor (Present)	4D	Sewers to convey flows from one of more Category 4C areas to another interceptor WWFP
CSO	5	Combined Sewer treatment/storage/separation per an approved WWFP
Planning	6	Detailed plan determining the need for and feasibility of water pollution abatement project(s)
Design	7	Plans, Specifications, and bidding documents
Non-Point	8	Implementation project per Non-Point Source Plan (SGP # 731)
Estuarine	9	Implementation project per Comprehensive Conservation and Management Plan (SGP # 715)
Onsite Wastewater Treatment Facility (OWTS)	10	Alternative systems, subsurface (OWTS), and Wastewater Management Districts (WWMD) per RIGL 45-24.5
Stormwater	11	Planning & Implementation of municipal stormwater management programs and controls
Other	12	Other water pollution abatement or water quality improvement projects

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PROJECT NAME	ESTIMATED COST PER PPL	As of 7/1/2018	Completed
FPWWTF Blowers Improvements-Phase II	\$ 9,285,000	\$ 8,783,522	No
River Model Development	538,000	557,495	No
Greenhouse Gas Study	77,000	76,589	No
NBC Energy Sustainability Project	225,000	203,456	No
RIPDES Compliance Improvements	1,551,000	1,523,567	No
FPWWTF Tunnel Pump Improvements	988,783	988,783	Yes
Water Quality Science Building	21,906,348	21,906,348	Yes
BPWWTF Biogas Reuse Energy Project	8,271,641	8,271,641	No
IM Facilities	6,425,000	6,425,000	No
FPWWTF Final Clarifiers Improvements	4,136,853	4,300,257	No
FPWWTF Maintenance Facilities	6,478,000	6,461,000	No
WWTF Improvements	3,296,000	3,296,000	No
Phase II CSO Facilities Program & Construction Management	19,981,855	19,981,855	Yes
Phase II CSO Facilities – OF 106	5,578,554	5,578,554	Yes
Phase II CSO Facilities – WCSOI West	10,226,154	10,226,154	Yes
WCSOI OF 046 Relief Structure	1,000,000	3,875,137	No
Inspection and Cleaning of CSO Interceptors	3,608,000	3,608,000	No
Rehabilitation of the NBC CSO Interceptors	6,484,000	6,484,000	No
Louisquisset Pike Interceptor Replacement	4,594,000	4,594,000	No
Moshassuck Valley Interceptor Replacement	7,035,000	9,983,198	No
Providence River Siphon Rehabilitation	6,922,000	7,678,756	No
Improvements to Interceptors-FY 2015	1,218,160	1,133,942	Yes
Improvements to Interceptors-FY 2017	1,570,840	795,222	Yes
NBC Interceptor Easements	878,000	876,000	No
Interceptor Easements – NBC BVI	971,288	716,590	No
NBC Interceptor Easements Restoration BVI Wetlands	194,000	170,000	No
Floatables Control Facilities for CSO Outfalls	5,003,030	5,003,030	Yes
NBC System Wide Facilities Planning	386,000	385,500	No
Phase III CSO Facilities Design	74,000,000	74,022,137	No
Phase III CSO Facilities Pawtucket Tunnel & Pump Station Cavern	261,454,784	260,920,562	No
Phase III CSO Facilities Tunnel Pump Station Fit-Out	63,427,555	63,297,955	No
Phase III CSO Facilities OF 205 Facilities	23,345,789	23,298,087	No
Phase III CSO Facilities OF 210/213/214 Facilities	28,244,555	28,186,843	No
Phase III CSO Facilities OF 217 Facilities	4,639,361	4,629,882	No
Phase III CSO Facilities OF 218 Facilities	21,697,313	21,652,979	No
Phase III CSO Facilities Regulator Modifications	1,628,765	1,625,437	No
Phase III CSO Facilities GSI Demonstration Project	3,622,500	3,615,098	No
Phase III CSO Facilities GSI Projects	8,331,750	8,314,726	No
Phase III CSO Facilities BPWWTF Clarifiers and Flow Splitters	11,723,615	11,699,661	No
Phase III CSO Facilities 1304 High Street Demolition	450,760	299,570	No
Phase III CSO Facilities Dexter Street Parking Lot GSI	603,750	602,517	No
Phase III CSO Facilities BPWWTF Polymer System	241,500	241,006	No
Phase III CSO Facilities Phase III B	28,500,000	28,484,341	No
Phase III CSO Facilities Phase III C	165,000,000	164,660,000	No
Phase III CSO Facilities Phase III D	83,500,000	83,500,000	No
NBC Facility Electrical Improvements	130,000	130,000	No
NBC System Wide Inflow Reduction	455,000	455,000	No
Municipal Sewer Acquisition Impact	296,000	296,000	No
RIPDES Flow Monitoring System	848,000	826,192	No
Lincoln Septage Station Replacement	2,804,000	2,795,500	No
BPWWTF UV Disinfection Improvements	5,726,000	5,843,714	No
BPWWTF O&M Support Facilities	15,189,000	Rolled into CSO Phase III A	No
FPWWTF Facilities Plan Update	380,000	326,970	No
Omega Pump Station Upgrade	912,000	905,000	No

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**Comm. 1-4:** Please update the Commission on whether the Rhode Island Infrastructure Bank (RIIB) Board approved a 30-year or a 20-year amortization. If the Board approved a 30-year amortization, please update the rate year revenue requirement.

**Response:** RIIB has indicated that this item will be on the agenda for Board approval at their next meeting on November 19, 2018.

**Prepared by:** Karen Giebink

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**Comm. 1-5:** In Docket 4602, NBC responded to data request COMM 2-1 that the loan proceeds from that docket would fund project number 30800D, CSO Phase III – Design (Phase A) at a cost of \$35,800,000. How much has been spent to date on the design of Phase III? Provide a schedule detailing what has been completed in the design of the CSO III project, phases A-D, the costs spent or projected for each phase and when each phase is scheduled to be completed.

**Response:** NBC has spent \$13,945,190 on CSO Phase III A & B Design as of September 30, 2018 and the table below shows the projected costs and schedule for each phase based on the 2017 Reevaluation Report in 2018 dollars:

	Spent as of September 30, 2018	Total Estimated Cost	Projected Start Date	Projected Completion Date
CSO Phase III A & B Design	\$ 13,945,190	\$ 74,022,137	April 2013	December 2021
CSO Phase III A Construction	-	428,384,324	August 2018	July 2026
CSO Phase III B Construction	-	28,484,341	December 2027	December 2030
CSO Phase III C Design	-	23,120,000	May 2032	June 2034
CSO Phase III C Construction	-	141,540,000	April 2034	June 2037
CSO Phase III D Design	-	13,180,000	April 2037	September 2039
CSO Phase III D Construction	-	70,320,000	August 2039	December 2041
	<u>\$ 13,945,190</u>	<u>\$ 779,050,802</u>		

Tasks completed to date are highlighted below:

**Completion of the CSO Control Facilities Amended Reevaluation Report which includes but is not limited to the following tasks:**

- Evaluation of green infrastructure alternatives;
- Evaluation of changes in water quality since prior Phases became operational
- Development of a cost estimate for Phase III
- Evaluation of the Phase III cost impact on sewer rates
- Completion of an affordability analysis based on Environmental Protection Agency (EPA) criteria and Integrated Planning Framework (IPF);

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- Establishment of a Stakeholders Group to obtain input on the Phase III Reevaluation;
- Development of the Bucklin Point Service Area Hydraulic Model;
- Update of the water quality model to assess pollutant loading and water quality;
- Completed technology screening and control strategy assessment to develop four alternatives including:
  - Green Stormwater Infrastructure (GSI)
  - Sewer Separation
  - Tunnels
  - Interceptors
  - Regulator Modifications
  - Near Surface Storage Tanks,
  - Treatment (Screening and Disinfection) and Discharge
  - Wetland Treatment
- Development of four alternatives along with cost estimates and an affordability analysis for each of the alternatives.

Subsequent to the Board's selection of Alternative 2, the following tasks were completed:

**Environmental Assessment Activities including:**

Environmental Assessment (EA) activities related to the CSO Phase III Facilities were completed to assess the environmental consequences (positive and negative) of the planned Phase III activities related to:

- Green Stormwater Infrastructure (GSI) demonstration project sites in Pawtucket and Central Falls.
- Facility Plan Amendment (FPA) work at the Bucklin Point WWTF to assess the environmental impacts of the selected improvement alternative including the identification of detrimental impacts, exploration of mitigation measures and addressing the relationship between short-term impacts to the environment and the enhancement of long-term environmental benefits. In the case of the Bucklin Point FPA completed work efforts to date, the preliminary EA efforts indicate an overwhelming positive environmental benefit to the community and surrounding and should result in a favorable review from the Rhode Island Department of Environmental Management's (RIDEM's ) and the issuance of a Finding of No Significant Impact (FONSI).

**Preliminary Design Activities were completed including:**

- Program Management work activities such as the development of a Program Governance Plan, Design Standards Manual, Risk Assessments, Program Master Schedule, and Updated Opinion of Probable Cost(s).
- Preliminary design of GSI Demonstration Projects.
- Design of High Street building demolition and development of related Contract Documents.
- Preliminary design phase services were completed for the proposed Bucklin Point Tunnel Pump Station (BPTPS), including:
  - Exploration of “Cavern” vs. “Shaft” style pump station design layouts
  - Advancement of tunnel pump station siting location options
  - Exploration of various pumping design concepts and related operational control strategies
  - Opinion of probable cost update(s)
  - Evaluation of the facility’s above-grade structure architectural design concepts
  - Investigation of the facility’s impact to the Bucklin Point WWTF
  - Evaluation of the Bucklin Point Tunnel Pump Station (TPS) Supervisor Control and Data Acquisition (SCADA) System
- Preliminary Design Phase Services for the Bucklin Point WWTF Improvements including:
  - Evaluation of Bucklin Point TPS’s impact on the operation and performance of the Bucklin Point WWTF
  - Investigation and preliminary design activities for enhancements to the facility’s Secondary Clarification Systems (i.e. two new Secondary Clarifiers, Return Activated Sludge system, flow control system, polymer feed system and other ancillary controls), Influent Pumping facilities; Process Control System and related appurtenances.
  - The advancement of the Bucklin Point WWTF Facility Plan Amendment.

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- Geologic Exploration Program – site investigations and related work activities.
- Tunnel Alignment Refinement and preliminary design
- Tunnel Drop Shaft conceptual design activities
- Exploration of the preferred delivery method for the Pawtucket Tunnel (Prescriptive Design-Build).
- Subsurface geotechnical soil investigations and related boring program activities.
- Geotechnical Baseline Report
- Consolidation Conduit conceptual designs and associated design consultant procurement related activities.
- Regulator conceptual designs and associated design consultant procurement related activities.
- Gate and Screening Structure conceptual designs and associated design consultant procurement related activities
- GSI conceptual designs and associated design consultant procurement related activities.

Additional Site-Work was performed including:

- Geotechnical Boring Program
- Environmental Site Assessments and related field investigation and sampling activities

**Prepared by:** Kathryn Kelly/David Bowen



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**Comm. 1-6:** Why has the schedule for the completion of the CSO Phase III facilities been increased from 9 years to 23 years. How does this change affect the costs and scope of the project?

**Response:** The primary driver of the schedule extension was the mitigation of ratepayer impact while meeting water quality criteria. NBC is required to complete the third and final phase under a Consent Agreement with RIDEM. Spreading out the project completion timeline as reflected in Alternative 2 eliminates the large spike in user rates that would have resulted under the original plan.

NBC had to negotiate the schedule and project changes with RIDEM and as part of this process agreed to incorporate \$10 million of green stormwater infrastructure (GSI) into each sub-phase of the project for a total increase in project cost of \$40 million. One other scope change is the construction of a stub tunnel instead of an interceptor to convey flow from CSO 220 to the tunnel at an estimated cost of \$30 million.

**Prepared by:** Kathryn Kelly

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**Comm. 1-7:** Please describe the green infrastructure alternatives that are included in the project.

**Response:** Green stormwater infrastructure alternatives included in the project include pervious pavement, bio-retention basins, and tree box filters. Additional alternatives such as underground retention systems, rain garden bump outs, and bioswales may be added as well.

**Prepared by:** Kathryn Kelly

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**Comm. 1-8:** Has NBC been issued any fines for noncompliance of the Consent Agreement with RIDEM or from any federal or state agencies for violations related to this project?

**Response:** No, NBC has not been issued any fines for noncompliance of the Consent Agreement with RIDEM or from any federal or state agencies for violations related to the CSO Phase III project.

**Prepared by:** Jennifer Harrington, Esq.

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**Comm. 1-9:** Please provide the costs estimates and affordability analysis that was completed for each of the four alternatives in the Conceptual Design Report Amendment, including any updates.

**Response:** To clarify, the four alternatives detailed on page four of Kathryn Kelly's testimony are described in the 2015 Reevaluation Report, not the 1998 Conceptual Design Report Amendment (CDRA). Alternative 1 (baseline CDRA) consists of the CSO controls and proposed schedule stated in the 1998 CDRA. The three remaining alternatives are the CSO controls and schedules developed as a result of the analysis described on pages 3-4 of my testimony.

Project cost estimates for the four alternatives can be found in chapter six, section 6.4 of the CSO Control Facilities Phase III Reevaluation Report Volume 1. Section 6.5 provides a cost summary and comparison of these alternatives. The affordability analysis can be found in chapter one of the same report.

In April 2015 NBC selected alternative two with a pre-design cost estimate \$815.0 million. A reevaluation and optimization plan approved by RIDEM in December 2017 reduced the projected cost to \$779.1 million. Please note that this is a pre-design estimate in 2018 dollars. The cost estimates will continue to be refined as the project proceeds through final design. Economic conditions and other factors at the time the project is bid will also impact project costs.

**Prepared by:** Kathryn Kelly

### CERTIFICATION

I hereby certify that on October 30, 2018, I sent a copy of the within to all parties set forth on the attached Service List by electronic mail and copies to Luly Massaro, Commission Clerk, by electronic mail and regular mail.

Parties/Address	E-mail Distribution	Phone
Joseph A. Keough, Jr., Esq. Keough & Sweeney 41 Mendon Ave. Pawtucket, RI 02861	<a href="mailto:jkeoughjr@keoughsweeney.com">jkeoughjr@keoughsweeney.com</a> ;	401-724-3600
Karen L. Giebink, Director of A&F Narragansett Bay Commission One Service Road Providence, RI 02905	<a href="mailto:Kgiebink@narrabay.com">Kgiebink@narrabay.com</a> ;	401-461-8848
	<a href="mailto:Kkelly@narrabay.com">Kkelly@narrabay.com</a> ;	
	<a href="mailto:Sarnold@narrabay.com">Sarnold@narrabay.com</a> ;	
	<a href="mailto:Gdegnan@narrabay.com">Gdegnan@narrabay.com</a> ;	
Christy Hetherington, Esq. Dept. of Attorney General 150 South Main St. Providence, RI 02903	<a href="mailto:Chetherington@riag.ri.gov">Chetherington@riag.ri.gov</a> ;	401-222-2424
	<a href="mailto:Al.mancini@dpuc.ri.gov">Al.mancini@dpuc.ri.gov</a> ;	
	<a href="mailto:dmacrae@riag.ri.gov">dmacrae@riag.ri.gov</a> ;	
	<a href="mailto:jmunoz@riag.ri.gov">jmunoz@riag.ri.gov</a> ;	
	<a href="mailto:pat.smith@dpuc.ri.gov">pat.smith@dpuc.ri.gov</a> ;	
	<a href="mailto:John.bell@dpuc.ri.gov">John.bell@dpuc.ri.gov</a> ;	
<b>Original and nine (9) copies w/:</b> Luly E. Massaro, Commission Clerk Cynthia Wilson-Frias, Commission Counsel Public Utilities Commission 89 Jefferson Blvd. Warwick, RI 02888	<a href="mailto:Luly.massaro@puc.ri.gov">Luly.massaro@puc.ri.gov</a> ;	401-780-2107
	<a href="mailto:Cynthia.WilsonFrias@puc.ri.gov">Cynthia.WilsonFrias@puc.ri.gov</a> ;	
	<a href="mailto:Sharon.ColbyCamara@puc.ri.gov">Sharon.ColbyCamara@puc.ri.gov</a> ;	



Joseph A. Keough, Jr., Esquire # 4925  
KEOUGH & SWEENEY, LTD.  
41 Mendon Avenue  
Pawtucket, RI 02861  
(401) 724-3600 (phone)  
(401) 724-9909 (fax)  
[jkeoughjr@keoughsweeney.com](mailto:jkeoughjr@keoughsweeney.com)