



Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

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**VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY
ENFORCEMENT ACTION - ORDER BY CONSENT
ISSUED TO
TOWN OF COLONIAL BEACH
FOR
Colonial Beach Wastewater Treatment Plant
VPDES Permit No. VA0026409**

SECTION A: Purpose

This is a Consent Order issued under the authority of Va. Code § 62.1-44.15, between the Department of Environmental Quality (“Department” or “DEQ”) and the Town of Colonial Beach (“Colonial Beach”), regarding the Colonial Beach Wastewater Treatment Plant (“WWTP”) and collection system (collectively referred to as the “Facility”) for the purpose of resolving certain violations of the State Water Control Law.

SECTION B: Definitions

Unless the context clearly indicates otherwise, the terms in this Consent Order have the meanings assigned to them in Va. Code § 62.1-44.2 *et seq.*, the Virginia Pollutant Discharge Elimination System (“VPDES”) Permit Regulation at 9 VAC 25-31-10, and VPDES Permit No. 0026409.

SECTION C: Findings of Fact and Conclusions of Law

1. Colonial Beach is a political subdivision of the Commonwealth of Virginia and is a “person” within the meaning of Va. Code § 62.1-44.3.
2. Colonial Beach owns and operates the Facility located at, 2301 McKinney Boulevard Colonial Beach, Virginia, 22443. The Facility collects, treats and discharges treated sewage and other municipal wastewater for residential and business customers in Colonial Beach.
3. VPDES Permit No. VA0026409 was issued under the State Water Control Law and VPDES Permit Regulation to Colonial Beach on July 1, 2023 with an expiration date of June 30, 2028 (“Permit”). The Permit authorizes Colonial Beach to discharge treated sewage and other municipal wastewater from the Facility to the Monroe Bay-Potomac River Basin

(Potomac River Sub-basin) in strict compliance with the terms and conditions of the Permit. NOV No. W2023-06-P-001, described below, was issued on June 7, 2023 pursuant to requirements identified in VPDES Permit No. VA0026409, effective from August 1, 2017 to July 31, 2022. That permit was subject to administrative continuance during the re-application process occurring from July 31, 2022 to July 1, 2023.

4. The Facility is located in the Monroe Bay-Potomac River Basin (Potomac Sub-basin). In the 2022 305(b)/303(d) Water Quality Assessment Integrated Report, Monroe Bay was assessed as a Category 4A water (“Impaired or threatened for one or more designated uses but does not require a TMDL [Total Maximum Daily Load] because the TMDL for specific pollutant(s) is complete and U.S. Environmental Protection Agency (“EPA”) approved.”) The Aquatic Life Use is impaired due to inadequate submerged aquatic vegetation in the Potomac mesohaline estuary. In addition, upper Monroe Bay is impaired due to pH exceedances caused by natural conditions in the watershed. The Fish Consumption Use is impaired due to PCBs in fish tissue; arsenic in fish tissue is considered a non-impairing observed effect. The Wildlife Use and Recreation Use are not assessed. The Monroe Creek Shellfish Bacterial TMDL was approved by EPA on June 8, 2006 and by the Virginia State Water Control Board (“SWCB”) on July 27, 2009. The Facility was not addressed in the TMDL because it is located within a prohibited zone where shellfish use is removed.
 - 4.1. The Facility was addressed in the Potomac River Watershed PCB TMDL, which was approved by EPA on October 31, 2007 and by the SWCB on April 11, 2008. The Facility received a total PCB wasteload allocation of 0.177 g/year based on a design flow of 2.0 MGD, which equates to a 94% reduction from their calculated baseline load. The Chesapeake Bay TMDL was approved by EPA on December 29, 2010.
 - 4.2. The TMDL allocates loads for total nitrogen, total phosphorus, and total suspended solids to protect the dissolved oxygen and submerged aquatic vegetation criteria in the Chesapeake Bay and its tidal tributaries. The Facility is a significant nutrient discharger in the Potomac mesohaline estuary (POTMH_VA) and is assigned individual wasteload allocations of 18,273 lbs./year of total nitrogen, 1,827 lbs./year of total phosphorus, and 182,733.6 lbs./year of total suspended solids. Monroe Bay is historically considered a Tier 1 water.
5. **NOV No. W2023-06-P-0001** was issued on June 7, 2023 (“June 2023 NOV”) based on eDMR submissions for the month of April 2023 and calendar year 2022. In submitting eDMRs, as required by the Permit, Colonial Beach reported information indicating an exceedance of discharge limitations. Effluent limit requirements are identified in greater detail in Table 1 (below).

TABLE 1 <i>Parameter</i>	Monitoring Period / Reported Result		
	<i>CY 2022</i>	<i>Apr 2023</i>	<i>Requirement*</i>
794 – Total Phosphorus Avg. Conc. (mg/L)	0.32	-	0.30 / Annual
039 – Ammonia as N Max. Conc. (mg/L)	-	3.98	1.62 / Weekly

* Part I.A.1 of the Permit contains conditions that enumerate the identified limits.

Va. Code § 62.1-44.5(A) states “[e]xcept in compliance with a certificate or permit issued by the Board or other entity authorized by the Board to issue a certificate or permit pursuant to this chapter, it shall be unlawful for any person to: 1. Discharge into state waters sewage, industrial wastes, other wastes, or any noxious or deleterious substances; 2. Excavate in a wetland; 3. Otherwise alter the physical, chemical or biological properties of state waters and make them detrimental to the public health, or to animal or aquatic life, or to the uses of such waters for domestic or industrial consumption, or for recreation, or for other uses . . .”

9 VAC 25-31-50(A) states “[e]xcept in compliance with a VPDES permit, or another permit, issued by the board, it shall be unlawful for any person to: 1. Discharge into state waters sewage, industrial wastes, other wastes, or any noxious or deleterious substances; or 2. Otherwise alter the physical, chemical or biological properties of such state waters and make them detrimental to the public health, or to animal or aquatic life, or to the use of such waters for domestic or industrial consumption, or for recreation, or for other uses.”

Part I.A.1 of the Permit contains effluent limitations and monitoring requirements, including monitoring frequencies, which Colonial Beach is required to meet in the operation of the Facility. Specifically, “During the period beginning with the permit’s effective date and lasting until the permit’s expiration date, the permittee is authorized to discharge from outfall number 001. Such discharges shall be limited and monitored as specified . . .”

Permit Part II.F states, “Except in compliance with this permit, or another permit issued by the Department, it shall be unlawful for any person to: 1. Discharge into state waters sewage, industrial wastes, other wastes, or any noxious or deleterious substances; or 2. Otherwise alter the physical, chemical or biological properties of such state waters and make them detrimental to the public health, or to animal or aquatic life, or to the use of such waters for domestic or industrial consumption, or for recreation, or for other uses.”

6. **NOV No. W2023-07-P-0001** was issued on July 14, 2023 (“July 2023 NOV”), and makes the observations provided below.

6.1. On July 4, 2023, DEQ received notification from Colonial Beach of an estimated 1.14 MG unpermitted discharge of sewage from the Facility’s raw influent pump station to Goldman Creek. The discharge occurred July 3-4, 2023, resulting in a recreational use closure until July 7, 2023, and extension to an existing shellfish harvest closure area.

See Va. Code § 62.1-44.5(A), 9 VAC 25-31-50(A), 9 VAC 25-260-20(A), and Permit Part II.F *supra* pg. 3.

6.2. Colonial Beach made eDMR submissions for the months of May and June 2023, indicating effluent limit violations. Effluent limit requirements are identified in greater detail in Table 2 (below).

See Va. Code § 62.1-44.5(A), 9 VAC 25-31-50(A), 9 VAC 25-260-20(A) and Permit Parts I.A.1 & II.F *supra* pg. 3.

NOV TABLE 2	Monitoring Period / Reported Result		
	Parameter	May 2023	June 2023
039 – Ammonia as N Avg. Conc. (mg/L)	2.14	-	1.19 / Monthly
039 – Ammonia as N Max. Conc. (mg/L)	5.62	2.74	1.62 / Weekly
003 – BOD5 Max. Loading (kg/Day)	-	359	240 / Weekly
003 – BOD5 Avg. Concentration (mg/L)	-	40	21 / Monthly
003 – BOD5 Max. Concentration (mg/L)	-	131	32 / Weekly

* Part I.A.1 of the Permit contains conditions that enumerate the identified limits.

7. **NOV No. W2023-12-P-002** was issued on December 8, 2023 (“December 2023 NOV”) and makes the observations provided below.

7.1. On November 11, 2023, DEQ received notification from Colonial Beach of an estimated 45,000-gallon unpermitted discharge resulting from overflow at the Facility to an unnamed tributary of Goldman Creek.

See Va. Code § 62.1-44.5(A), 9 VAC 25-31-50(A), 9 VAC 25-260-20(A), and Permit Part II.F *supra* pg. 3.

7.2. Colonial Beach made eDMR submissions for the months of August and September 2023, indicating effluent limit violations. Effluent limit requirements are identified in greater detail in Table 3 (below).

NOV TABLE 3	Monitoring Period / Reported Result		
	Parameter	August 2023	September 2023
039 – Ammonia as N Avg. Conc. (mg/L)	-	2.77	1.19 Monthly
039 – Ammonia as N Max. Conc. (mg/L)	6.8	10.20	1.62 Weekly

* Part I.A.1 of the Permit contains conditions that enumerate the identified limits.

See Va. Code § 62.1-44.5(A) and 9 VAC 25-31-50(A), and Permit Part I.A.1., and Permit Part II.F. *supra* pg. 3.

8. **NOV No. W2024-01-P-001** was issued on January 16, 2024 (“January 2024 NOV”) based on DEQ inspections on December 13 and 19, 2023. The NOV describes observations as provided below.

8.1. On December 18, 2023, DEQ was notified of an estimated 305,000-gallon

overflow from the WWTP influent pump station to an unnamed tributary of Goldman Creek. The WWTP also discharged an estimated 870,000 gallons of sewage solids to Monroe Bay.

See Va. Code § 62.1-44.5(A), 9 VAC 25-31-50(A), and Permit Part II.F. *supra* pg. 3.

8.2. Colonial Beach eDMR submissions for Outfall 001 for the Month of December 2023 and fourth quarter of 2023 indicate effluent limit violations. Effluent limit requirements are identified in greater detail in Table 4 (below).

NOV TABLE 4 <i>Parameter</i>	Monitoring Period / Reported Result		
	<i>December 2023</i>	<i>October-December 2023</i>	<i>Requirement*</i>
006 – Fecal Coliform Avg. Conc. (N/CML)	899	-	200 / Monthly
039 – Ammonia as N Max. Conc. (mg/L)	3.32	-	1.62 / Weekly
140 – Enterococci Avg. Conc. (N/CML)	77	-	35 / Monthly
064 – TSS, Percent Removal Min. Conc.	-	54	85% / Quarterly

* Part I.A.1 of the Permit contains conditions that enumerate the identified limits.

See Va. Code § 62.1-44.5(A) and 9 VAC 25-31-50(A), and Permit Part I.A.1., and Permit Part II.F. *supra* pg. 3.

8.3. A lack of preventative maintenance, nonfunctioning equipment, and unit process failures were identified during the inspections on December 13 and December 19, 2023. These deficiencies include: a) audible/visual alarms associated with the Yacht Club and Monroe Point pump stations were disabled; these pump stations are not equipped with an auto-dialer system; b) pump failure with temporary by-pass pump set-up at the scum pump station; c) a hole was observed in an interior wall of the influent pump station; d) algae growth was observed on the piping and walls in the effluent pump station, and water in the pump station was turbid; e) the mechanical fine screen was not operational; f) the grit removal system was not operational; g) sludge and vegetation were noted in both Flow Equalization Basin (“FEB”) units; h) one FEB mixer motor was not operational; i) two of three effluent pumps associated with the FEB reactors were not operational; j) the mixer / feed motor associated with the lime silo were not operational; k) accumulated floating solids and vegetation were observed in areas of nitrification reactor unit 2A; l) poor aeration was observed in nitrification reactor unit 2B; m) polymer was being fed via a garden hose at the floc tank prior to secondary clarifiers; n) vegetation was observed along the weirs of secondary clarifier No. 2; o) multiple bulb and ballast outages were observed on the UV unit display screen during the inspection; p) floating scum was observed in the south channels of the post-aeration basin; q) vegetative growth was observed on the walls of the south channels of the post-aeration basin and dried vegetation and solids were observed along the sides of the north (inactive) channels of the post-aeration basin; r) cracking was observed on the northeast corner of the post-aeration basin; s) a Return Activated Sludge (“RAS”) pump for secondary clarifier No. 1 could not be automatically activated; t) one Waste Activated Sludge (“WAS”) pump was not operational; and u) the facility’s belt press unit was not operational.

Permit Part II.Q states, “The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes effective plant performance, adequate funding, adequate staffing, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by the permittee only when the operation is necessary to achieve compliance with the conditions of this permit.”

- 8.4. The WWTP preventative maintenance program is not actively managed, and repair and replacement of treatment works equipment is not being initiated.

WWTP O&M Manual, Section 5.4 states that the facility is equipped with a computerized preventative maintenance system and that “. . . this system will generate daily work orders based on manufacturer’s recommendations. It will also generate a work history for each piece of equipment for use in evaluation of equipment use and reliability.”

Permit Part I.C.2, “The permittee shall maintain a current Operations and Maintenance (O&M) Manual for the treatment works that is in accordance with Virginia Pollutant Discharge Elimination System Regulations, 9 VAC 25-31 and (for sewage treatment plants) Sewage Collection and Treatment Regulations, 9 VAC 25- 790. The O&M Manual and subsequent revisions shall include the manual effective date and meet Part II.K.2 and Part II.K.4 Signatory Requirements of the permit. Any changes in the practices and procedures followed by the permittee shall be documented in the O&M Manual within 90 days of the effective date of the changes. The permittee shall operate the treatment works in accordance with the O&M Manual and shall make the O&M manual available to Department personnel for review during facility inspections. Within 30 days of a request by DEQ, the current O&M Manual shall be submitted to the DEQ Regional Office for review and approval. The O&M manual shall detail the practices and procedures which will be followed to ensure compliance with the requirements of this permit. This manual shall include, but not necessarily be limited to, the following items, as appropriate . . . e) Discussion of treatment works design, treatment works operation, routine preventative maintenance of units within the treatment works, critical spare parts inventory and record keeping.”

- 8.5. An area of accumulated light brown scum was observed in the in-service post-aeration channels during the inspection on December 13, 2023. Effluent from the post-aeration channels discharges through a 90° V-notch weir before flowing to the facility’s final effluent pump station. The final effluent pump station discharges to Monroe Bay.

See Va. Code § 62.1-44.5(A), 9 VAC 25-31-50(A) and Permit Part II.F. *supra* at pg. 3.

- 8.6. Records for cross-connection testing, flow meter calibration and generator maintenance were not available for review during the December 13, 2023 inspection.

Permit Part II.B states, “1. Records of monitoring information shall include; a. The date, exact place, and time of sampling or measurements; b. The individual(s) who performed the sampling or measurements; c. The date(s) and time(s) analyses were performed; d. The individual(s) who performed the analyses; e. The analytical techniques or methods used; and f. The results of such analyses. 2. Except for records of monitoring information required by this permit related to the permittee’s sewage sludge use and disposal activities, which shall be retained for a period of at least five years, the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period of retention shall be extended automatically during the course of any unresolved litigation regarding the regulated activity or regarding control standards applicable to the permittee, or as requested by the Department.”

Permit Part II.D states, “The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Department may require the permittee to furnish, upon request, such plans, specifications, and other pertinent information as may be necessary to determine the effect of the wastes from his discharge on the quality of state waters, or such other information as may be necessary to accomplish the purposes of the State Water Control Law. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.”

- 8.7. UV protectant glasses are not kept onsite and available to WWTP staff for eye protection.

9 VAC 25-790-770.G states, “UV lamps should not be viewed in the ambient air without proper eye protection as required by VOSH and other applicable regulations. A minimum of one pair of UV protective eye glasses shall be provided.”

- 8.8. The Outfall 001 eDMR submitted for the October 2023 monitoring period contained the reporting errors identified in Table 5 (below).

NOV TABLE 5 <i>Parameter</i>	eDMR REPORTING ERROR	
	<i>October 2023</i>	<i>July-Sept. 2023 3rd Quarter</i>
354 - BOD5, Monthly Avg. Conc. (mg/L)	2.8	-
354 - BOD5, Weekly Max. Avg. Conc. (mg/L)	7.1	-
354 - BOD5, Monthly Avg. Loading (kg/D)	6.6	-
354 - BOD5, Weekly Max. Loading (kg/D)	21	-
002 - pH, Minimum (S.U.)	7.03	-
039 - Ammonia, Weekly Max Avg. Conc. (mg/L)	1.06	-
064 - TSS Percent Removal	-	21
625 - TSS Influent Avg. (mg/L)	-	133
979 - BOD5 Percent Removal (%)	-	97
354 - Influent Avg. (mg/L)	-	3318

Permit Part II.A.1 states, “Samples and measurements required by this permit shall be taken at the permit designated or approved location and be representative of the monitored activity.”

8.9. Based on the laboratory data provided for review, Colonial Beach did not collect Fecal Coliform (006) data during the July, August, September and October 2023 monitoring periods.

Permit Part I.A.1 states that a Fecal Coliform (006) grab sample is required to be collected at a frequency of 5 days per Week (10am – 4pm).

8.10. The WWTP sampling protocol requires that the day shift collect daily pH and DO effluent measurements. The daily operator data sheet for July 9, 2023 reports a morning pH and DO reading, and an additional evening effluent pH of 7.35 S.U. and an evening effluent DO of 3.14 MG/L. The minimum DO established in Part I.A.1 of the permit is 6.5 MG/L. The minimum DO reported on the July 2023 DMR is 6.5 MG/L.

Permit Part II.A.2 states, “Any pollutant specifically addressed by this permit that is sampled or measured at the permit designated or approved location more frequently than required by this permit shall meet the requirements in A 1. A through c above and the results of this monitoring shall be included in the calculations and reporting required by this permit.”

Permit Part II.I states, “The permittee shall report any noncompliance which may adversely affect state waters or may endanger public health. 1) An oral report shall be provided within 24 hours from the time the permittee becomes aware of the circumstances. The following shall be included as information which shall be reported within 24 hours under this paragraph: a. Any unanticipated bypass; and b. Any upset which causes a discharge to surface waters. 2) A written report shall be submitted within 5 days and shall contain: a. A description of the noncompliance and its cause; b. The period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to

continue; and c. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The Department may waive the written report on a case-by-case basis for reports of noncompliance under Part II I. if the oral report has been received within 24 hours and no adverse impact on state waters has been reported. 3) The permittee shall report all instances of noncompliance not reported under Parts II I.1 or 2, in writing, at the time the next monitoring reports are submitted. The reports shall contain the information listed in Part II I.2.”

- 8.11. The following observations were made during the laboratory inspection on December 13, 2023: a) the Facility did not have a thermometer in the automatic sampler at the effluent pump station and calibration records for the unit temperature sensor were not available for review during the inspection; b) laboratory control sample documentation was not available for review during the inspection; and c) records were not available for review that show the thermistor(s) associated with the Facility’s multi-meter are checked against the NIST-traceable reference thermometer within the manufacturer’s expiration date. These records are required to be recertified yearly.

Permit Part II.A.1.b states, “The permittee shall periodically calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals that will ensure accuracy of measurements.”

- 8.12. Initial Demonstration of Capability (“IDC”) documentation was not available for review at the time of the inspection on December 13, 2023.

Permit Part II.A.1.a states, “Monitoring shall be conducted according to procedures approved under Title 40 Code of Federal Regulations Part 136 or alternative methods approved by the U.S. Environmental Protection Agency, unless other procedures have been specified in this permit.”

9. Beginning on July 10, 2023, Department staff engaged in regular correspondence, as well as site visits and discussions with Colonial Beach. These discussions focused on root causes of non-compliance, initiation of interim corrective action, methods for project financing, integrated evaluation of the Facility and collection system, constituent communications, and enforcement process. The discussions informed the development of a comprehensive Schedule of Compliance in Appendix A and a Supplemental Environmental Project in Appendix B.
10. The July 2023 NOV describes that on July 4, 2023, DEQ received notification from Colonial Beach of an estimated 1.14 MG unpermitted discharge of sewage from the Facility’s raw influent pump station to Goldman Creek. The discharge occurred July 3-4, 2023. Upon further investigation, Colonial Beach provided credible flow data for the period of the release indicating the discharge volume is approximately 300,000 gal. instead of 1.14 MG.
11. Colonial Beach initiated an audit of eDMR effluent data submittals through the use of a consulting firm, Inboden Environmental Services Inc., to conduct an accuracy and quality review of eDMR submittals since January 2023. After completion of the audit, revised

eDMRs were submitted to DEQ to more accurately report effluent data and to improve accuracy of the WWTP's administrative record. Upon further review of the revised eDMRs, DEQ staff determined that certain violations described above, and that are the subject of DEQ's enforcement action, are premised on the inaccurate eDMR data reported to DEQ. DEQ also determined that the accurately reported eDMR data provided a basis to mitigate violations in the enforcement action, where appropriate. Incorrect data values are shown with a mark-out while correct values are shown in italics (e.g. ~~5.62~~ / 3.02) in the revised tables below.

REVISED NOV TABLE 2	Monitoring Period / Reported Result		
<i>Parameter</i>	<i>May 2023</i>	<i>June 2023</i>	<i>Requirement*</i>
039 – Ammonia as N Max. Conc. (mg/L)	5.62 / 3.02	2.74 / 2.32	1.62 / Weekly
003 – BOD5 – Max. Loading (kg/D)	-	359 / 347.58	240 / Weekly

REVISED NOV TABLE 3	Monitoring Period / Reported Result		
<i>Parameter</i>	<i>August 2023</i>	<i>September 2023</i>	<i>Requirement*</i>
039 – Ammonia as N Avg. Conc. (mg/L)	-	2.77 / 2.73	1.19 Monthly

REVISED NOV TABLE 4	Monitoring Period / Reported Result		
<i>Parameter</i>	<i>December 2023</i>	<i>October-December 2023</i>	<i>Requirement*</i>
006 – Fecal Coliform Avg. Conc. (N/CML)	899 / >493	-	200 / Monthly
039 – Ammonia as N Max. Conc. (mg/L)	3.32 / 1.99	-	1.62 / Weekly
140 – Enterococci Avg. Conc. (N/CML)	77 / >77	-	35 / Monthly
064 – TSS, Percent Removal Min. Conc. (%)	-	54 / 76	85% / Quarterly

REVISED NOV TABLE 5	eDMR Reporting Error	
<i>Parameter</i>	<i>October 2023</i>	<i>July-Sept. 2023 3rd Quarter</i>
354 - BOD5, Monthly Avg. Conc. (mg/L)	2.8 / 2.0	-
354 - BOD5, Weekly Max. Avg. Conc. (mg/L)	7.1 / 3.0	-
354 - BOD5, Monthly Avg. Loading (kg/D)	6.6 / 2.98	-
354 - BOD5, Weekly Max. Loading (kg/D)	21 / 3.90	-
002 - pH, Minimum (S.U.)	7.03 / 7.30	-
039 - Ammonia, Weekly Max Avg. Conc. (mg/L)	1.06 / 0.56	-
064 - TSS Percent Removal	-	21 / 91
625 - TSS Influent Avg. (mg/L)	-	133 / 130
979 - BOD5 Percent Removal (%)	-	97 / No Change
354 - Influent Avg. (mg/L)	-	3318 / 133

- Colonial Beach's audit of eDMR effluent data submittals resulted in a finding of additional effluent limit violations, including reported data from CY 2023 and January 2024. The violations are incorporated into this enforcement action and are identified in greater detail in Table 6 (below).

EFFLUENT LIMIT TABLE 6 <i>Parameter</i>	Monitoring Period / Reported Result						<i>Requirement</i> *
	<i>Aug</i> 2023	<i>Sept</i> 2023	<i>Nov</i> 2023	<i>Q4</i> 2023	<i>CY</i> 2023	<i>Jan</i> 2024	
006 – Fecal Coliform Avg. Conc. (N/CML)	>93	>98	>96			>189	200 / Monthly
979 – BOD5 % Removal Min. Conc. (%)				82			85% / Qtrly
792 – Total Nitrogen Cal. Yr. Avg. Conc. (mg/L)					4.80		3.0/Yearly
140 – Enterococci Avg. Conc. (#C/mL)			39			>34	35/Monthly

13. Va. Code § 62.1-44.15(5a) states that a VPDES permit is a “certificate” under the statute. The Department has issued no permits or certificates to Colonial Beach other than VPDES Permit No. VA0026409.
14. The receiving watershed, Monroe Bay-Potomac River Basin (Potomac Subbasin), is a surface water located wholly within the Commonwealth and is a “state water” under State Water Control Law.
15. Based on the foregoing information, the Department concludes that Colonial Beach violated Va. Code § 62.1-44.5(A), 9 VAC 25-31-50(A), 9 VAC 25-260-20(A) and the Permit.
16. In order for Colonial Beach to achieve a return to compliance, DEQ and Colonial Beach agree to the Schedule of Compliance, which is incorporated as Appendix A of this Order and the Supplemental Environmental Project, which is incorporated as Appendix B of this Order.

SECTION D: Background Information and Interim Corrective Action

1. Colonial Beach reports that Westmoreland County and Colonial Beach entered into a Wastewater Agreement on November 25, 2002, authorizing Westmoreland County to discharge up to 600,000 gallons of wastewater per day into the Colonial Beach WWTP.
2. The total current capacity of the discharge purchased by Westmoreland County is 483,820 gallons per day or 24.2 % of the total capacity of the WWTP. Pursuant to the Permit, the design flow capacity of the WWTP is 2.00 MGD. Permit Part I.A.1.a. (July 1, 2023).
3. In advance of DEQ enforcement action, Colonial Beach reports taking the following interim corrective actions to address violations identified in Section C, and to improve performance of the Colonial Beach WWTP:
 - 3.1. On March 8, 2024, Colonial Beach and Inboden Environmental Services, Inc. (“IES”) entered into a contract with a three-year term for the operation of the Colonial Beach WWTP. The scope of services to be provided under this contract include general operations, routine and preventative maintenance, professional support, on-site laboratory testing, monitoring and reporting, and record keeping.

- 3.2. Colonial Beach discontinued receiving septage from outside commercial vendors in January 2024, resulting in stress reduction to the treatment process and improved water quality.
- 3.3. Colonial Beach initiated a staff re-organization effort at the Colonial Beach WWTP. Upon assumption of operations by IES on March 8, 2024, Colonial Beach WWTP staff received remedial training in adjustments to flow and treatment processes to improve WWTP performance. The Colonial Beach WWTP is currently staffed on a 24-hour/7-day a week schedule by licensed IES employees. Supervisors are on site daily and IES supervisory staff receive reports via cell phone every three (3) hours to monitor WWTP performance.
- 3.4. WWTP return pumps were slowed, allowing clarifiers to function as designed. The action resulted in increasing solids concentration in the clarifier and improvement in wasting.
- 3.5. Increased use of blowers intended for the anoxic tanks improved break-up of vegetation and screenings previously by-passing the bar screen.
- 3.6. Aeration of both nitrification tanks resulted in improved management of DO levels between 1-3 mg/l.
- 3.7. Flushing the WWTP sand filters resulted in increased flow throughput and process efficiency.
- 3.8. Starting a newer flow equalization basin pump resulted in both nitrification tanks being fed influent, thereby allowing the tanks to operate as designed.
- 3.9. Prepared for rain events by shutting off air and mixing in nitrification tanks to retain all solids.
- 3.10. Worked with maintenance staff to unclog pipes from the nitrification tanks to the clarifiers, providing the ability to stop emergency by-pass.
- 3.11. Identified inadequate lab equipment and procedures. Appropriate testing equipment was subsequently ordered.
- 3.12. Worked with maintenance staff to diagnose polymer pump issues.
- 3.13. Began using treatment chemicals more effectively by changing dosing points to improve water quality.
- 3.14. Substituted pH adjustment chemical additions to optimize treatment process.
- 3.15. Revised operator work schedules to improve alignment with WWTP operational requirements, staff training and organizational-team cohesion.

- 3.16. Continued testing of pH adjustment pumps to determine reliability of pumping equipment currently on site.
- 3.17. Opened the influent valve to anoxic/EQ 1 B to balance tank levels.
- 3.18. Replaced electrical equipment to make waste pumps fully operational.
- 3.19. Drained and flushed floc tank, as well as removed debris, to allow proper hydraulic flow through the tank.
- 3.20. Updated the WWTP SCADA system for on-site and remote notification for failures occurring in the treatment process. Upgrades and maintenance of the SCADA system are also continuing as other WWTP improvements occur.
- 3.21. Colonial Beach reports the commitment of funding for the completion of certain projects associated with maintenance and upgrade of the WWTP. The projects and expenditure amounts described in Table 7 contribute to meeting the requirements of this Order and long-term durable compliance.

<i>Description</i>	<i>Expenditure</i>
SCADA System	\$150,000
2 Influent Pumps	\$100,000
2 Effluent Pumps	\$80,000
Sludge Pump / Waste RAS	\$50,000
FEB Jet Pump	\$6,500
Auto Sampler	\$10,000
RTU20 Back-up Pump	\$15,000
Jet Pump Motor	\$13,250
Press Room Pump (a)	\$44,000
Clarifier Motor	\$10,000
Press Room Pumps (b)	\$37,000
UV Upgrade	\$10,000
Root Blower	\$7,500
FEB Kits	\$15,000
Scum Pit Pumps	\$20,000
Septage Pit Pump	\$25,000
TOTAL	\$593,250

- 4. Colonial Beach is addressing infiltration and inflow (“I&I”) in the collection system to reduce overflow events, optimize process performance and improve effluent water quality. Colonial Beach obtained a \$5.7 million grant from DEQ to address needed areas of improvement to the aged collection lines and related infrastructure. The highest priority area, the Central Drainage Area (“CDA”) is complete, and a request for proposals for engineering services to address additional projects is in development. Funds for these projects are dedicated and made available via the remainder of the referenced DEQ grant. Colonial Beach

continues to identify and prioritize additional I&I and WWTP projects for further planning, financing and completion.

5. Colonial Beach appropriated \$750,000 of undesignated fund balance from their Wastewater Fund (supported only by wastewater fees and charges) via Colonial Beach Town Council action on January 17, 2024, for emergency repairs at the WWTP. Colonial Beach increased the FY2025 operations budget for the WWTP to address increasing operational costs and needed repairs. Colonial Beach proposed a 6 % sewer rate increase in the Town Manager's Proposed FY 2025 budget, an increase from \$854 to \$905.24 per year. The median household income for Colonial Beach is \$55,731 (*See*, 2022 American Community Survey, U.S. Bureau of the Census and U.S. Department of Housing and Urban Development). The proposed increase in wastewater fees is projected to generate \$127,496 of operations revenue in FY 2025. Colonial Beach continues to evaluate the current rate structure to determine if increases are required to address Facility improvements and increasing cost of operations.

SECTION E: Agreement and Order

1. Accordingly, by virtue of the authority granted it in Va. Code §§ 62.1-44.15, the Department orders Colonial Beach, and Colonial Beach agrees to:
2. Perform the actions described in Appendices A and B of this Order; and
3. Colonial Beach is assessed a civil charge of **\$67,393**, of which **\$60,654** shall be allocated to the completion of the Supplemental Environmental Project ("SEP") in Appendix B and described below. Colonial beach shall pay the remainder of the civil charge in the amount of **\$6,739 within 30 days** of the effective date of the Order in settlement of the cited violations. Payment shall be made by check, certified check, money order or cashier's check payable to the "Treasurer of Virginia," and delivered to:

Receipts Control
Department of Environmental Quality
Post Office Box 1104
Richmond, Virginia 23218

Colonial Beach shall include its Federal Employer Identification Number (FEIN) with the civil charge payment and shall indicate that the payment is being made in accordance with the requirements of this Order for deposit into the Virginia Environmental Emergency Response Fund (VEERF). If the Department is required to refer collection of moneys due under this Order to the Department of Law, Colonial Beach shall be liable for attorneys' fees of 30% of the amount outstanding.

4. Colonial Beach shall allocate \$60,654 of the civil charge toward satisfactory completion of the SEP. The net project costs of the SEP shall not be less than the SEP amount set forth in Paragraph D.2. In the event the amount is less, Colonial Beach shall immediately pay the remaining amount in accordance with the instructions in Paragraph D.2, unless otherwise agreed to by the Department. "Net project cost" means the net present after-tax cost of the

SEP, including tax savings, grants, first-year cost reductions and other efficiencies realized by virtue of project implementation. If the proposed SEP is for a project for which Colonial Beach will receive an identifiable tax savings (e.g., tax credits for pollution control or recycling equipment), grants, or first-year operation cost reductions, or other efficiencies, the net project cost shall be reduced by those amounts. The costs of those portions of the SEP that are funded by state or federal low-interest loans, contracts, or grants shall be deducted.

5. By signing this Order, Colonial Beach certifies that it has not commenced performance of the SEP.
6. Colonial Beach acknowledges that it is solely responsible for completing the SEP project. Any transfer of funds, tasks, or otherwise by Colonial Beach to a third party, shall not relieve Colonial Beach of its responsibility to complete the SEP as described in this Order.
7. In the event Colonial Beach publicizes the SEP, or makes use of any results of the SEP, Colonial Beach shall state in a prominent manner in the place such results are made available that the project is part of and required by this Order.
8. The Department has the sole discretion to authorize any alternate, equivalent SEP proposed by Colonial Beach, and to determine whether the SEP or alternate SEP has achieved satisfactory completion.
9. Should the Department determine that Colonial Beach has not completed the SEP or alternate SEP in a satisfactory manner, the Department shall so notify Colonial Beach in writing. Within 30 days of being notified, Colonial Beach shall pay the amount specified and as instructed in Paragraph D.2.b.

SECTION F: Administrative Provisions

1. The Department may modify, rewrite, or amend this Order with the consent of Colonial Beach for good cause shown by Colonial Beach, or on its own motion pursuant to the Administrative Process Act, Va. Code § 2.2-4000 *et seq.*, after notice and opportunity to be heard.
2. This Order addresses and resolves only those violations specifically identified in Section C of this Order. This Order shall not preclude the Department or the Director from taking any action authorized by law, including but not limited to: (1) taking any action authorized by law regarding any additional, subsequent, or subsequently discovered violations; (2) seeking subsequent remediation of the facility; or (3) taking subsequent action to enforce the Order.
3. For purposes of this Order and subsequent actions with respect to this Order only, Colonial Beach admits the jurisdictional allegations, findings of fact, and conclusions of law contained herein.
4. Colonial Beach consents to venue in the Circuit Court of the City of Richmond for any civil action taken to enforce the terms of this Order.

5. Colonial Beach declares it has received fair and due process under the Administrative Process Act and the State Water Control Law and it waives the right to any hearing or other administrative proceeding authorized or required by law or regulation, and to any judicial review of any issue of fact or law contained herein. Nothing herein shall be construed as a waiver of the right to any administrative proceeding for, or to judicial review of, any action taken by the Department to modify, rewrite, amend, or enforce this Order.
6. Failure by Colonial Beach to comply with any of the terms of this Order shall constitute a violation of an order of the Department. Nothing herein shall waive the initiation of appropriate enforcement actions or the issuance of additional orders as appropriate by the Department or the Director as a result of such violations. Nothing herein shall affect appropriate enforcement actions by any other federal, state, or local regulatory authority.
7. If any provision of this Order is found to be unenforceable for any reason, the remainder of the Order shall remain in full force and effect.
8. Colonial Beach shall be responsible for failure to comply with any of the terms and conditions of this Order unless compliance is made impossible by earthquake, flood, other acts of God, war, strike, or such other unforeseeable circumstances beyond its control and not due to a lack of good faith or diligence on its part. Colonial Beach shall demonstrate that such circumstances were beyond its control and not due to a lack of good faith or diligence on its part. Colonial Beach shall notify the DEQ Regional Director verbally within 24 hours and in writing within three business days when circumstances are anticipated to occur, are occurring, or have occurred that may delay compliance or cause noncompliance with any requirement of the Order. Such notice shall set forth:
 - 8.1. the reasons for the delay or non-compliance;
 - 8.2. the projected duration of any such delay or non-compliance;
 - 8.3. the measures taken and to be taken to prevent or minimize such delay or noncompliance; and
 - 8.4. the timetable by which such measures will be implemented and the date full compliance will be achieved.

Failure to so notify the Regional Director verbally within 24 hours and in writing within three business days, of learning of any condition above, which the parties intend to assert will result in the impossibility of compliance, shall constitute a waiver of any claim to inability to comply with a requirement of this Order.

9. This Order is binding on the parties hereto and any successors in interest, designees and assigns, jointly and severally.

10. This Order shall become effective upon execution by both the Director or his designee and Colonial Beach. Nevertheless, Colonial Beach agrees to be bound by any compliance date which precedes the effective date of this Order.
11. This Order shall continue in effect until:
 - 11.1. The Director or his designee terminates the Order after Colonial Beach has completed all of the requirements of the Order;
 - 11.2. Colonial Beach petitions the Director or his designee to terminate the Order after it has completed all of the requirements of the Order and the Director or his designee approves the termination of the Order; or
 - 11.3. the Director or Department terminates the Order in his or its sole discretion upon 30 days' written notice to Colonial Beach.


Termination of this Order, or any obligation imposed in this Order, shall not operate to relieve Colonial Beach from its obligation to comply with any statute, regulation, permit condition, other order, certificate, certification, standard, or requirement otherwise applicable.

12. Any plans, reports, schedules or specifications attached hereto or submitted by Colonial Beach and approved by the Department pursuant to this Order are incorporated into this Order. Any non-compliance with such approved documents shall be considered a violation of this Order.
13. The undersigned representative of Colonial Beach certifies that he or she is a responsible official authorized to enter into the terms and conditions of this Order and to execute and legally bind Colonial Beach to this document. Any documents to be submitted pursuant to this Order shall also be submitted by a responsible official of Colonial Beach
14. This Order constitutes the entire agreement and understanding of the parties concerning settlement of the violations identified in Section C of this Order, and there are no representations, warranties, covenants, terms or conditions agreed upon between the parties other than those expressed in this Order.
15. By its signature below, Colonial Beach voluntarily agrees to the issuance of this Order.

And it is so ORDERED this _____ day of _____, 2024.

Jerome A. Brooks, Regional Director
Department of Environmental Quality

The Town of Colonial Beach voluntarily agrees to the issuance of this Order.

Date: 6-5-24 By:  _____,
Natasha Tucker Colonial Beach Town Manager

In re:	Colonial Beach WWTP
	32301 McKinley Blvd.
	Colonial Beach VA 22443
	Facility Name: Same
NOV No.	W2023-07-P-001 / July 14, 2023
	W2023-06-P-001 / June 7, 2023
	W2024-01-P-001 / January 16, 2024

EA No. PR23-0604
PR23-0719

Reg. No. VPDES VA0026409

APPENDIX A

SCHEDULE OF COMPLIANCE

This Schedule of Compliance (“SOC”) is developed to identify certain requirements necessary to address violations of the Virginia State Water Control Law, including violations of Va. Code § 62.1-44.5(A), 9 VAC 25-31-50(A), 9 VAC 25-260-20(A) and the Permit. The SOC is also developed to promote Colonial Beach’s independent observance of long-term, durable compliance. The SOC emphasizes five strategic areas for Colonial Beach to achieve closure of this enforcement action, including: 1) timely and sufficient financing to ensure completion of corrective actions identified in this Order and SOC; 2) sufficient long-term funding through utility service rate increases to ensure adequate and continued operation and maintenance of the Facility in compliance with regulatory requirements; 3) a comprehensive evaluation of the Facility to identify all corrective actions; 4) a firm schedule and timeline that identifies project completion dates and accurately aligns with the availability of funding; and 5) regular project monitoring and reporting made available to all interested parties to promote transparency, and validate progress and completion of corrective action.

Colonial Beach shall take the following actions:

1. **Funding for Corrective Action and Long-Term Compliance.** Upon the effective date of the Order, Colonial Beach shall raise sufficient revenue to the limit of its financial capability to ensure timely completion of the corrective action requirements identified in this Order and SOC. Further, Colonial Beach shall raise sufficient revenue to the limit of its financial capability to ensure adequate and continued operation and maintenance of the Facility in compliance with regulatory requirements. A determination of compliance with the requirement to “raise revenue to the limit of its financial capability” is based on the following criteria:
 - 1.1. On no less than an annual basis, beginning on the effective date of this Order, Colonial Beach shall adjust sewer rates so that within three years of the effective date of this Order: (a) average annual sewer rates for current residential rate-payers is no less than 1.50% of median household income as determined by the U.S. Department of Housing and Urban Development; (b) average sewer rates for current rate-payers identified as commercial users are equal to the rate charged to residential rate-payers, (c) rates for new residential and commercial rate-payers are set at the rates described in subparagraphs (a) and (b) upon initial connection; and (d) Colonial Beach shall ensure that

all rate-payer revenue is exclusively dedicated to the Facility for general Facility operation, timely completion of the corrective actions identified in this Order and SOC, and for adequate and continued operation and maintenance of the Facility. Rate-payer revenue shall not be diverted for any other purpose.

- 1.2. Colonial Beach shall, as needed, borrow funds for Facility projects and long-term compliance in accordance with Colonial Beach's General Covenants, ordinances and bond indenture requirements. Colonial Beach shall maintain a maximum wastewater utility debt coverage ratio at or below 1.15.
- 1.3. Colonial Beach shall regularly investigate, evaluate and apply for applicable federal and state grants and loans from all available sources.

Interim Corrective Action by Colonial Beach as of May 31, 2024. Colonial Beach is in substantial compliance with Item 1.1. Colonial Beach proposes a 6 % sewer rate increase in the Town Manager's Proposed FY 2025 budget, an increase from \$854 to \$905.24 per year. The proposal is pending consideration and approval by Colonial Beach Town Counsel on June 20, 2024. The median household income for Colonial Beach is \$55,731 (See, 2022 American Community Survey, U.S. Bureau of the Census and U.S. Department of Housing and Urban Development). 1.5 % of the median household income of \$55,731 is \$835.96. Colonial Beach currently meets the rate requirement of 1.5% of median household income. Colonial Beach's proposed FY 2025 rate increase is 1.624% of median household income. The proposed increase in wastewater fees is projected to generate \$127,496 of operations revenue in FY 2025. Colonial Beach continues to evaluate the current rate structure to determine if increases are required to address Facility improvements and increasing cost of operations.

2. **Comprehensive Facility Evaluation.** Within **30 days** of the effective date of this Order, Colonial Beach shall secure a reputable third-party consultant or professional engineer to complete a Comprehensive Facility Evaluation that includes, but shall not be limited to:
 - 2.1. a root cause analysis of all release events since July 1, 2023;
 - 2.2. a root cause analysis of all effluent limit exceedances since July 1, 2023;
 - 2.3. review of methodologies and standards to accurately estimate spill volume during bypass/overflow events;
 - 2.4. a review of the effectiveness of Facility alarm systems for overflow events and operational failures;
 - 2.5. a review of overflow event and operational failure response plans for incident response communication, response timeliness, impact evaluation and mitigation, reporting, and overall response effectiveness;
 - 2.6. a review of methods to track and report illicit dumping in the collection system;

- 2.7. sufficiency of operator competency, certification, and training for all assigned operator positions;
- 2.8. sufficiency of current staffing to operate Facility in compliance with regulatory requirements;
- 2.9. sufficiency of operator competency and training for timely and accurate eDMR reporting;
- 2.10. a root cause analysis of each of the violations identified in NOV No. W2023-06-P-001 (June 7, 2023), NOV No. W2023-07-P-001 (July 14, 2023), NOV No. W2023-12-P-002 (December 8, 2023), and NOV No. W2024-01-P-001 (January 16, 2024);
- 2.11. a review of any other areas of concern identified by Colonial Beach contributing to overflow events, pollutant discharge, and effective WWTP performance; and
- 2.12. a description of any corrective action taken in advance of the effective date of this Order and date of completion.

Colonial Beach shall submit such Comprehensive Facility Evaluation to DEQ for review and coordination on or before **December 31, 2024**. The evaluation must make reasonable and sufficient professional determinations about Facility condition and performance toward the elimination of overflow events and pollutant discharges from the Facility. The evaluation shall also describe in detail all compliance risks to fully inform Colonial Beach of necessary corrective action. Where compliance risks are identified, such evaluation shall describe recommended corrective action to sufficiently determine the cost of corrective action and required time to complete such corrective action. Upon completion, the Comprehensive Facility Evaluation shall be incorporated by reference and made a fully enforceable part of the Order and SOC.

Interim Corrective Action by Colonial Beach as of May 31, 2024. Colonial Beach has retained an independent engineering firm, Bowman Engineering, to assist Colonial Beach staff and IES in the development of the required Comprehensive Facility Evaluation. The Comprehensive Facility Evaluation will be informed by DEQ inspections that are the subject of this Order, as well as a WWTP Assessment completed by a grant funded, third-party consulting firm, Moonshot Missions, conducted on December 9, 2023. The Moonshot Missions assessment is projected to be complete in June 2024.

3. **Effluent Limit and Overflow Prevention Plan**. Within **30 days** of the effective date of this Order, Colonial Beach shall secure a reputable third-party consultant or professional engineer to complete an Effluent Limit and Overflow Prevention Plan that includes, but shall not be limited to:
 - 3.1. an evaluation and identification of Facility areas of operational risk for effluent limit violation and overflow events;
 - 3.2. pursuant to the Colonial Beach O&M Manual (Section 5.4), installation and implementation of a computerized preventative maintenance system that generates daily

work orders based on manufacturer's recommendations for maintenance and replacement of Facility equipment and working parts. The system must also generate a work history for each piece of equipment for use in evaluation of equipment use and reliability. c) regular inspection, testing, maintenance and repair of all Facility equipment, systems, collection lines, pump stations, and other systems having the potential to cause leaks, spills and other releases of pollutants from the Facility;

- 3.3. a detailed and formatted list of regular inspection items, frequency of inspection, options for comments and recommendations resulting from inspection, and description of maintenance, repair or replacement as a response measure;
- 3.4. include a requirement that inspections performed pursuant to the Effluent Limit and Overflow Prevention Plan be performed by a skilled, competent facility operator; and
- 3.5. include a requirement that all inspection records shall be retained by Colonial Beach and subject to DEQ review upon request.

Colonial Beach shall submit such Effluent Limit and Overflow Prevention Plan to DEQ for review and coordination on or before December 31, 2024. Upon completion, the effluent Limit and Overflow Prevention Plan shall be incorporated by reference and made a fully enforceable part of the Order and SOC. The Effluent Limit and Overflow Prevention Plan shall also be incorporated by reference and made a fully enforceable part of the Facility's Operation & Maintenance Manual (Required by Permit Part I.C.2).

Interim Corrective Action by Colonial Beach as of May 31, 2024. Colonial Beach has retained Bowman Engineering to assist Colonial Beach staff and IES in the development of the required Effluent Limit and Overflow Prevention Plan. The Effluent Limit and Overflow Prevention Plan will be informed by DEQ inspections that are the subject of this Order, as well as a WWTP Assessment by Moonshot Missions conducted on December 9, 2023. The Moonshot Missions assessment is projected to be complete in June 2024.

4. **Corrective Action Project Schedule.** Within **30 days** of the effective date of this Order, Colonial Beach shall secure a reputable third-party consultant or professional engineer to complete a Corrective Action Project Schedule that includes, but shall not be limited to a line-item description of: Incorporate the Upgrade Spreadsheet into this order as a separate chart; this will communicate that the work has been complete or is progress. The upgrades contribute to compliance and improvement in plant performance.
 - 4.1. the corrective action item by category of WWTP or Collection System;
 - 4.2. description of the project;
 - 4.3. specific violation and/or compliance risk the corrective action is addressing;
 - 4.4. estimated cost of the corrective action;
 - 4.5. source(s) of availability of funding;

- 4.6. actual expenditure toward corrective action as of time of reporting;
- 4.7. estimated funding gap to complete corrective action;
- 4.8. projected corrective action start date;
- 4.9. projected corrective action completion date;
- 4.10. prioritization of corrective action based on compliance risk; and
- 4.11. notes section for progress updates;
- 4.12. estimated project completion based on percentage value.

The referenced Corrective Action Project Schedule shall also include a line-item description of each current public works project for the Facility (e.g. Colonial Beach Central Drainage Area Project) initiated or that will be initiated by Colonial Beach as of January 1, 2022, including:

- 4.13. a description of the project by category of WWTP or Collection System;
- 4.14. a description of the problem the project is addressing;
- 4.15. estimated cost of the project;
- 4.16. source(s) of availability of funding;
- 4.17. actual expenditure toward corrective action as of time of reporting;
- 4.18. estimated funding gap to complete correction action;
- 4.19. project start date;
- 4.20. project completion date;
- 4.21. prioritization of projects based on compliance risk; and
- 4.22. notes section for progress updates;
- 4.23. estimated project completion based on percentage value.

A correlating Gantt chart (or similar format) with similar information as above shall also be completed to promote internal and external communication of corrective action progress. Colonial Beach shall submit such Corrective Action Project Schedule and Gantt chart (or similar format) to DEQ for review and coordination **on or before December 31, 2024**. The schedule must make reasonable and sufficient professional determinations about the availability of funds and alignment with corrective action project completion. Upon completion, the Corrective Action Project Schedule shall be incorporated by reference and made a fully enforceable part of the Order and SOC.

***Interim Corrective Action by Colonial Beach as of May 31, 2024.** Colonial Beach has retained Bowman Engineering to assist Colonial Beach staff and IES in the development of the required Corrective Action Project Schedule. The Corrective Action Project Schedule will be informed by*

DEQ inspections that are the subject of this Order, as well as a WWTP Assessment by Moonshot Missions conducted on December 9, 2023. The Moonshot Missions assessment is projected to be complete in June 2024.

5. **Monthly and Annual Progress Reporting.** Colonial Beach shall conduct regular project monitoring, and complete regular reporting to be made available to all interested parties to promote transparency, and to validate progress and completion of corrective actions. Reporting shall be completed pursuant to the requirements below.

5.1. **Utility Rate and Project Finance Report – Annual Reporting Requirement.** Colonial Beach shall secure a reputable third-party consultant or accountant to complete a Utility Rate and Project Finance Report that includes, but shall not be limited to:

- 5.1.1. a schedule of all sewer rates and charges in effect during the current report year and three previous years;
- 5.1.2. a description of any changes in sewer rates and charges during the report year;
- 5.1.3. a schedule calculating the current year average annual sewer bill for residential and commercial ratepayers for monthly sewer use;
- 5.1.4. the percentage of such bill to median household income in Colonial Beach;
- 5.1.5. a schedule detailing all Facility related revenue (e.g. service rates, connections, etc.), all operation and maintenance expenses, debt service, reserve funds, and the sewer debt service coverage ratio for the reported year;
- 5.1.6. a schedule detailing all borrowed funds, grants, and other sources of funds, including the amount of funds obligated for all Facility projects for the reported year;
- 5.1.7. a schedule describing current residential and commercial rate structures; and
- 5.1.8. a description of Colonial Beach efforts to investigate, evaluate and apply for applicable federal and state grants and loans from all available sources.

Colonial Beach shall submit such Utility Rate and Project Finance Report to DEQ for review and coordination **on or before December 31st of each year the Order is effective.** The report must provide reasonable and sufficient professional information to determine compliance with SOC Para. 1, Funding for Corrective Action and Long-Term Compliance.

Interim Corrective Action by Colonial Beach as of May 31, 2024. Colonial Beach retains an independent financial advisor, Davenport, as well as independent auditors, Robinson, Farmer and Cox, and a utility rate consultant, Raftelis, to provide professional services supporting Colonial beach financial matters. Colonial Beach is enlisting these advisors to develop an annual financial report and reporting format that conforms with the requirements of SOC, Paragraph 5.

5.2. Corrective Action Progress Report - Monthly Requirement. Colonial Beach shall complete a Corrective Action Progress Report in Gantt chart (or similar format) that includes the information described in SOC, Paragraph 4. Colonial Beach shall submit such Corrective Action Progress Report to DEQ for review and coordination **on or before the first day of each month the Order is effective.** The report must provide reasonable and sufficient professional information to determine compliance with SOC Paragraph. 4, Corrective Action Project Schedule.

Interim Corrective Action by Colonial Beach as of May 31, 2024. Colonial Beach continues to seek methods to engage and inform Colonial Beach constituents and other stakeholders, including the use of town public meetings and periodic reporting through media. Colonial Beach currently offers to the community, and continues to develop, a public-facing webpage on the Colonial Beach website to inform constituents and stakeholders of ongoing WWTP operations. Colonial Beach intends to include the following improvements and information on the webpage: a) inclusion of DEQ's Consent Order and Schedule of Compliance once executed and made effective; b) a Consent Order Dashboard tracking progress and compliance with the requirements of the Consent Order and Schedule of Compliance; c) a Project Dashboard tracking progress and improvements to the collection system and WWTP; d) Colonial Beach staff contact information for constituents and stakeholders to request information and provide comment about the collection system and WWTP; and e) improved access to the Colonial Beach Code Red emergency notification tool, providing notice to constituents and stakeholders of changing water quality levels in the event of a spill, operational failure, overflow or similar event affecting effluent quality.

6. **DEQ Contact.** Unless otherwise specified in this Order, all documents and other information required by this Order shall be submitted to:

Virginia Department of Environmental Quality
PRO/Enforcement Office
4949-A Cox Road
Glen Allen, Virginia 23060
EM: Jefferson.Reynolds@DEQ.Virginia.gov
Matthew.Richardson@DEQ.Virginia.gov

In re:	Colonial Beach WWTP
	2301 McKinley Blvd.
	Colonial Beach VA 22443
	Facility Name: Same
NOV No.	W2023-07-P-001 / July 14, 2023
	W2023-06-P-001 / June 7, 2023
	W2024-01-P-001 / January 16, 2024

**EA No. PR23-0604
PR23-0719**

Reg. No. VPDES VA0026409

**APPENDIX B
SUPPLEMENTAL ENVIRONMENTAL PROJECT
Town of Colonial Beach Submittal Dated May 20, 2024**

BACKGROUND

The Town of Colonial Beach owns and operates their own wastewater treatment plant, and having been cited for permit violations, is entering into a consent order with the Virginia Department of Environmental Quality. As part of the resolution, the Town proposes to undertake a SEP that exceeds the requirements of the law and provides additional benefits to the quality of public health through water quality determination. Water quality will be evaluated by implementing a water quality sampling plan, data collection, and data reporting/interpretation.

OBJECTIVE

The Town of Colonial Beach is located on the Potomac River, and the community surrounding the Town is heavily invested in recreational and commercial use of these waters. The wastewater treatment plant VPDES discharge is located on Monroe Bay, and the SEP aims to ensure that the body of water receiving discharge from the treatment plant and those surrounding the Town of Colonial Beach are safe and suitable for fishing and recreational use. The goal of the SEP program involves the collection of environmental water quality information in an effort to increase protection of public health, and engage the community by informing the public of the monitoring data and how they align with the Virginia Department of Health (VDH) guidelines for swimming in a natural body of water. Furthermore, this project is designed to provide pollution reduction by utilizing the data collected to benefit the DEQ TMDL program.

SEP CHARACTERISTICS

- ***Environmentally Beneficial:*** The project will enhance water quality and contribute to the health of the aquatic ecosystem. The SEP will also protect and reduce risk to public health by making water quality data readily available on Colonial Beach's website.

- ***Voluntary Undertaking:*** The Town has chosen to implement this SEP voluntarily, demonstrating its commitment to environmental stewardship. Colonial Beach is not otherwise required by law to perform the project.
- ***Beyond Legal Requirement:*** The proposed water quality monitoring goes beyond the Town's current legal obligations, representing a proactive approach to environmental management.
- ***Nexus to Violation:*** The SEP directly addresses the impact of the Town's VPDES discharge on the receiving water body, aligning with the nature of the permit violations.
- ***Tangible Benefits:*** The monitoring results will provide quantifiable data on the water body's condition to the public (i.e. recreation and economic users) and other stakeholders. The data is also intended to be of sufficient quality and quantity to inform DEQ water quality program evaluation for the water body, ensuring it remains a viable resource for the community.
- ***Multimedia Impacts:*** While focused on water quality, the SEP will also indirectly benefit related environmental media by promoting a healthier watershed.
- ***Pollution Prevention:*** The project emphasizes the prevention of further pollution through ongoing assessment and timely response to potential sources of water quality impairment.

SEP QUALIFICATIONS

- ***Public Health:*** The Town is located directly on the shore of the Potomac River, and the community and Town economy is centered around this body of water for various water recreation and maritime activities. This SEP will provide a diagnostic element of these waters to ensure public health is protected through sampling and reporting bacteria (Enterococci), and providing water recreational use advisories using VDH guidelines and resources.

Currently, the VDH Beach Monitoring program monitors 45 public beaches located on the Chesapeake Bay and Atlantic Ocean with no sample activities being conducted in Colonial Beach. This is important to note as efforts of the SEP plan do not duplicate other water quality monitoring programs, and users directly affected by water quality will benefit from the project.

- ***Environmental Restoration and Protection:*** This SEP characteristically qualifies for environmental restoration and protection through comprehensive weekly sampling for field parameters that can be utilized by DEQ's water quality programs. The SEP conducts water quality monitoring of key parameters in the watershed that was adversely affected.

PLAN DETAILS

- **Water Quality Monitoring:** Implement a comprehensive monitoring program to regularly assess the levels of bacteria (Enterococci) and other relevant parameters. The monitoring program will last for two years with samples being collected between the months of May 1st and September 1st (typical water recreational times). A map of sample locations is provided in Attachment A. The table below details the sampling locations, frequency of sampling, and analyte types.

Sample Site Location	Testing Frequency	Monitoring
TCBSEP-W1	Weekly	Bacteria Field Tests: pH, DO, Temp.
TCBSEP-W2	Weekly	Bacteria Field Tests: pH, DO, Temp.
TCBSEP-W3	Weekly	Bacteria Field Tests: pH, DO, Temp.
TCBSEP-W4	Weekly	Bacteria Field Tests: pH, DO, Temp.
TCBSEP-W5	Weekly	Bacteria Field Tests: pH, DO, Temp.
TCBSEP-W6	Weekly	Bacteria Field Tests: pH, DO, Temp.
TCBSEP-W7	Weekly	Bacteria Field Tests: pH, DO, Temp.

Additional data that will be captured includes high tide times, Ebb current windows, and preceding rainfall events up to 72 hours prior to sampling.

- **Reporting, Transparency, and Community Engagement:** Colonial Beach will ensure that all findings are reported transparently and are accessible to the public, allowing for informed community use of the water body. The Town will assimilate the testing data and provide the results to the public through the Town’s website. Inboden Environmental Services, Inc. (“IES”) will serve as the subject matter expert to provide data interpretation and field questions from the public. Colonial Beach will also involve local stakeholders in the monitoring process to foster community awareness and participation.
- **Data Quality:** For this data to be useful for both the Public Health benefit and Environmental Restoration, it must be viable and defensible. IES is the contract operations and environmental consulting firm the Town will utilize to carry out the sampling, testing, and reporting aspects of this project. EPA accepted practices for sampling and analysis will be used for all data collection. Analytical testing methods described at 40 CFR Part 136 will be employed, and IES will utilize its Chapter 46

NELAC Accredited laboratory for all non-field analysis. These practices will be put into place to ensure the quality of the data is equivalent to DEQ Level III. IES will work with the local DEQ citizen data coordinator to ensure water quality monitoring practices meet Level III criteria. Level III data will be submitted to the DEQ Citizen Monitoring Program to be used for assessment in DEQ’s Biennial Integrated Report. Colonial Beach will employ the guidance provided by DEQ’s Citizen Monitoring Program at:

<https://www.deq.virginia.gov/our-programs/water/water-quality/monitoring/citizen-monitoring>

Appropriate Level III data uses and specific criteria to meet Level III qualifying data is described in the table below.

Levels of Volunteer Collected Water Quality Data in Virginia		
DEQ Data Level	Appropriate Data Uses	Data QA/QC Protocols
Level III	<ul style="list-style-type: none"> - All uses listed for Levels I, II & III, as described below - List or delist waters on the 303(d) impaired waters list - Assess waters for 305(b) Report - Use with DEQ data for TMDL development - Identify waters for DEQ follow up monitoring - Track performance of TMDL implementation - Education - Baseline conditions - Notification of potential pollution event - Local land use decision-making - Special studies 	<ul style="list-style-type: none"> - DEQ-approved Quality Assurance Project Plan (QAPP) and field or lab Standard Operating Procedures (SOP). - Field and/or laboratory audit required. - Provide calibration and quality control associated information to DEQ when submitting data. This information must meet the specific criteria stated in the QAPP.

- **Continuous Improvement:** The proposed SEP and water quality monitoring is for a period of 2 years, and will be designed around the current revision of DEQ’s citizens water quality monitoring program. The Town and its agents will provide support and training for those in the community who wish to continue the program after the term of the project is complete. The data collected will also benefit State agencies to support their efforts to identify potential point sources of pollution and improve water quality around Colonial Beach.
- **Implementation Costs:** The table below represents the costs associated with implementing the SEP program.

Item	Unit Price	Quantity	Total Cost
Sample Collection Cost	\$ 210.00	252	\$ 52,920.00
Field Testing Analysis	\$ 20.00	252	\$ 5,040.00
Bacteriological Monitoring	\$ 45.00	252	\$ 11,340.00
Results Reporting and Interpretation	\$ 120.00	36	\$ 4,320.00
Total SEP Plan Cost			\$ 73,620.00

- **Reporting:** Colonial Beach will provide DEQ monthly reporting of all data and any evaluation of such data for each month monitoring occurs. The data will be forwarded to DEQ within 30 days of lab analysis completion. At the conclusion of the project, Colonial Beach will provide a complete set of all data collected and a final evaluation of the data. A final project report will be forwarded to DEQ within 30 days of completion of SEP.

CONCLUSION

This SEP plan represents a robust response to the consent order, with the potential to not only reconcile the permit violations but also significantly benefit the local environment, community, and regulatory agencies.

