AUTHORIZATION TO DISCHARGE UNDER
THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Clean Water Act as amended, 33 U.S.C. §§ 1251 et seq. (the "CWA"),

Granite State Concrete Co., Inc.

is authorized to discharge from a facility located at

Granite State Concrete Co., Inc.
534 Groton Road
Westford, MA 01886

to receiving water named

Gilson Brook Pond (part of Gilson Brook), tributary to Stony Brook
Merrimack River Watershed

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

This Permit shall become effective on [*the first day of the calendar month immediately following 60 days after signature*].[1]

This Permit expires at midnight on [*five years from the last day of the month preceding the effective date*].

This Permit supersedes the Permit issued on June 24, 2010.

This Permit consists of this **cover page**, **Part I**, **Attachment A** (Freshwater Acute Toxicity Test Procedure and Protocol, February 2011), and **Part II** (NPDES Part II Standard Conditions, April 2018).

Signed this day of

_____
Ken Moraff, Director - Water Division
Environmental Protection Agency
Region 1
Boston, MA

[1] Pursuant to 40 Code of Federal Regulations (CFR) § 124.15(b)(3), if no comments requesting a change to the Draft Permit are received, the Permit will become effective upon the date of signature. Procedures for appealing EPA's Final Permit decision may be found at 40 CFR § 124.19.

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date and lasting through the expiration date, the Permittee is authorized to discharge quarry water, consisting of the quarry process water, rock crushing process water, groundwater and stormwater, through Outfall Serial Number 001 to Gilson Brook Pond. The discharge shall be limited and monitored as specified below; the receiving water shall be monitored as specified below.

Effluent Characteristic	**Effluent Limitations**		**Monitoring Requirements[1,2,3]**	
	Average Monthly	**Maximum Daily**	**Measurement Frequency[4]**	**Sample Type[5]**
Flow Rate[6]	---	Report gpm	Continuous when discharging	Meter or Estimate
Total Flow[7]	Report Mgal/month		Continuous when discharging	Meter or Estimate
Number of Events[7]	Report #/month		Continuous when discharging	Count
Total Suspended Solids (TSS)	20 mg/L	40 mg/L	2/month	Composite
pH[8]	6.5 - 8.3 S.U.		2/month	Grab
Turbidity	25 NTU	25 NTU	2/month	Grab[9]
Total Nitrogen	---	Report mg/L	1/month	Composite
Ammonia Nitrogen	---	Report mg/L	1/quarter	Composite
Perchlorate[10]	---	Report mg/L	1/month	Composite
Oil and Grease	---	Report mg/L	1/quarter	Composite
Whole Effluent Toxicity (WET) Testing[11,12]				
LC_{50}	---	Report %	1/year	Composite
C-NOEC	---	Report %	1/year	Composite
Hardness	---	Report mg/L	1/year	Composite
Ammonia Nitrogen	---	Report mg/L	1/year	Composite

Effluent Characteristic	Effluent Limitations		Monitoring Requirements[1,2,3]	
	Average Monthly	Maximum Daily	Measurement Frequency[4]	Sample Type[5]
Total Aluminum	---	Report mg/L	1/year	Composite
Total Cadmium	---	Report mg/L	1/year	Composite
Total Copper	---	Report mg/L	1/year	Composite
Total Nickel	---	Report mg/L	1/year	Composite
Total Lead	---	Report mg/L	1/year	Composite
Total Zinc	---	Report mg/L	1/year	Composite

Ambient Characteristic[13]	Reporting Requirements		Monitoring Requirements[1,2,3]	
	Average Monthly	Maximum Daily	Measurement Frequency[4]	Sample Type[5]
Hardness	---	Report mg/L	1/year	Grab
Ammonia Nitrogen	---	Report mg/L	1/ year	Grab
Total Aluminum	---	Report mg/L	1/ year	Grab
Total Cadmium	---	Report mg/L	1/ year	Grab
Total Copper	---	Report mg/L	1/ year	Grab
Total Nickel	---	Report mg/L	1/ year	Grab
Total Lead	---	Report mg/L	1/ year	Grab
Total Zinc	---	Report mg/L	1/ year	Grab
pH[14]	---	Report S.U.	1/ year	Grab
Temperature[14]	---	Report °C	1/ year	Grab

Footnotes:

1. Effluent samples shall yield data representative of the discharge. A routine sampling program shall be developed in which samples are taken at a point between the flexible quarry discharge pipe and the culvert, both located on the hill north of Gilson Brook Pond, when discharging from the quarry. Changes in sampling location must be approved in writing by the Environmental Protection Agency Region 1 (EPA). The Permittee shall report the results to EPA and the State of any additional testing above that required herein, if testing is done in accordance with 40 CFR Part 136.

2. In accordance with 40 CFR § 122.44(i)(1)(iv), the Permittee shall monitor according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR Part 136 or required under 40 CFR chapter I, subchapter N or O, for the analysis of pollutants or pollutant parameters (except WET). A method is "sufficiently sensitive" when: 1) the method minimum level (ML) is at or below the level of the effluent limitation established in the permit for the measured pollutant or pollutant parameter; or 2) the method has the lowest ML of the analytical methods approved under 40 CFR Part 136 or required under 40 CFR chapter I, subchapter N or O for the measured pollutant or pollutant parameter. The term "minimum level" refers to either the sample concentration equivalent to the lowest calibration point in a method or a multiple of the method detection limit (MDL), whichever is higher. Minimum levels may be obtained in several ways: They may be published in a method; they may be based on the lowest acceptable calibration point used by a laboratory; or they may be calculated by multiplying the MDL in a method, or the MDL determined by a laboratory, by a factor.

3. When a parameter is not detected above the ML, the Permittee must report the data qualifier signifying less than the ML for that parameter (e.g., < 50 µg/L, if the ML for a parameter is 50 µg/L). For calculating and reporting the average monthly concentration when one or more values are not detected, assign a value of zero to all non-detects and report the average of all the results. The number of exceedances shall be enumerated for each parameter in the field provided on every Discharge Monitoring Report (DMR).

4. Measurement frequency of "when discharging" is defined as the sampling of any measurable discharge event, reported for each calendar month. Measurement frequency of 1/month is defined as the sampling of one discharge event in each calendar month. Measurement frequency of 2/month is defined as the sampling of two discharge events in each calendar month. Measurement frequency of 1/quarter is defined as the sampling of one discharge event during one calendar quarter. Calendar quarters are defined as January through March, inclusive, April through June, inclusive, July through September, inclusive and October through December, inclusive. Measurement frequency of 1/year is defined as the sampling of one discharge event during one calendar year. If no sample is collected during the measurement frequencies defined above, the Permittee must report an appropriate No Data Indicator Code.

5. Each composite sample will consist of at least eight grab samples, either collected at equal intervals and combined proportional to flow or continuously collected proportionally to flow. Each composite sample shall be taken during one consecutive 24-hour period. If the discharge period is less than 24 hours, the composite sample shall be taken during all periods of discharge occurring that calendar day. The timing of the grab samples shall coincide with the timing of composite sampling.

6. The Permittee shall report the maximum instantaneous flow rate of water discharged by the Facility during the reporting period. The reported maximum instantaneous flow rate, measured in gallons per minute (gpm) shall be based upon an appropriately calibrated flow measuring device or the capacity of the discharge pump.

7. Report total monthly discharge flow. Total monthly flow shall be reported in the units of millions of gallons per month (Mgal/month). The Permittee shall also report the total number of days during the reporting period for which there was a discharge from the outfall (to be noted on DMR form under "Event Total" parameter).

8. The pH shall be within the specified range at all times. The minimum and maximum pH sample measurement values for the month shall be reported in standard units (S.U.).

9. Turbidity shall be monitored during each discharge event. Three grab samples shall be collected and analyzed: during the beginning, middle and end of each discharge event, which could occur over a period of more or less than 24 hours. The average for each set of three grab samples shall be reported on the DMR.

10. Perchlorate shall be monitored in conjunction with total nitrogen.

11. The Permittee shall conduct acute toxicity tests (LC_{50}) and chronic toxicity tests (C-NOEC) 1/year, during the month of September in accordance with test procedures and protocols specified in **Attachment A** of this permit. LC_{50} and C-NOEC are defined in Part II.E. of this Permit. The Permittee shall test the daphnid, *Ceriodaphnia dubia*, and the fathead minnow, *Pimephales promelas*. The complete report for each toxicity test shall be submitted as an attachment to the DMR.

12. For Part I.A.1., Whole Effluent Toxicity Testing, the Permittee shall conduct the analyses specified in **Attachment A**, Part VI. CHEMICAL ANALYSIS for the effluent sample. If toxicity test(s) using the receiving water as diluent show the receiving water to be toxic or unreliable, the Permittee shall follow procedures outlined in **Attachment A**, Section IV., DILUTION WATER. Even where alternate dilution water has been used, the results of the receiving water control (0% effluent) analyses must be reported. Minimum levels and test methods are specified in **Attachment A**, Part VI. CHEMICAL ANALYSIS.

13. For Part I.A.1., Ambient Characteristic, the Permittee shall conduct the analyses specified in **Attachment A**, Part VI. CHEMICAL ANALYSIS for the receiving water sample collected as part of the WET testing requirements. Such samples shall be taken from the receiving water at a

point immediately upstream of the permitted discharge's zone of influence at a reasonably accessible location, as specified in **Attachment A**. Minimum levels and test methods are specified in **Attachment A**, Part VI. CHEMICAL ANALYSIS.

14. A pH and temperature measurement shall be taken of each receiving water sample at the time of collection and the results reported on the appropriate DMR. These pH and temperature measurements are independent from any pH and temperature measurements required by the WET testing protocols.

Part I.A. continued.

2. All existing manufacturing, commercial, mining, and silvicultural dischargers must notify EPA as soon as they know or have reason to believe (40 CFR § 122.42):

   a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the Permit, if that discharge will exceed the highest of the following "notification levels":

      (1) 100 micrograms per liter (µg/L);
      (2) 200 µg/L for acrolein and acrylonitrile; 500 µg/L for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (mg/L) for antimony;
      (3) Five times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR § 122.21(g)(7); or
      (4) Any other notification level established by EPA in accordance with 40 CFR § 122.44(f) and State regulations.

   b. That any activity has occurred or will occur which would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant which is not limited in the Permit, if that discharge will exceed the highest of the following "notification levels":

      (1) 500 µg/L;
      (2) One mg/L for antimony;
      (3) 10 times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR § 122.21(g)(7); or
      (4) Any other notification level established by EPA in accordance with 40 CFR § 122.44(f) and State regulations.

   c. That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the permit application.

B. UNAUTHORIZED DISCHARGES

1. This Permit authorizes discharges only from the outfall listed in Part I.A.1, in accordance with the terms and conditions of this Permit. Discharges of wastewater from any other point sources are not authorized by this Permit and shall be reported in accordance with Part D.1.e.(1) of the Standard Conditions of this Permit (24-hour reporting).

2. Discharges of stormwater other than stormwater discharges associated with the quarry operations are not authorized by this Permit.

3. The discharge of any accumulated solids, sludge, bottom deposits or material removed from the quarry pond or from any storage tank or basin at the Facility to the receiving water is prohibited.

4. Discharge of any ready-mix operation process water (including truck wash out water) is prohibited from discharging to Gilson Brook Pond.

C. SPECIAL CONDITIONS

1. Discharges of Chemicals and Additives

   The discharge of any chemical or additive, including chemical substitution that was not reported in the application submitted to EPA or provided through a subsequent written notification submitted to EPA is prohibited. Upon the effective date of this Permit, chemicals and/or additives that have been disclosed to EPA may be discharged up to the frequency and level disclosed, provided that such discharge does not violate §§ 307 or 311 of the CWA or applicable State water quality standards. Discharges of a new chemical or additive are authorized under this Permit 30 days following written notification to EPA unless otherwise notified by EPA. To request authorization to discharge a new chemical or additive, the Permittee must submit a written notification to EPA in accordance with Part I.D.3 of this Permit. The written notification must include the following information, at a minimum:

   a. The following information for each chemical and/or additive that will be discharged:

      (1) Product name, chemical formula, general description, and manufacturer of the chemical/additive;
      (2) Purpose or use of the chemical/additive;
      (3) Safety Data Sheet (SDS) and Chemical Abstracts Service (CAS) Registry number for each chemical/additive;
      (4) The frequency (e.g., hourly, daily), magnitude (i.e., maximum application concentration), duration (e.g., hours, days), and method of application for the chemical/additive;
      (5) If available, the vendor's reported aquatic toxicity (i.e., NOAEL and/or LC_{50} in percent for aquatic organism(s)).

   b. Written rationale that demonstrates that the discharge of such chemicals and/or additives as proposed will not: 1) will not add any pollutants in concentrations that exceed any permit effluent limitation; and 2) will not add any pollutants that would justify the application of permit conditions different from, or in addition to those currently in this Permit.

2. The Permittee must monitor the quarry discharge and report fecal coliform and *Escherichia coli* with the next application submitted for permit reissuance.

3. Within three months of the effective date of this Permit, the Permittee must submit to EPA an updated Storm Water Pollution Prevention Plan (SWPPP) and Spill Prevention, Control, and Countermeasure (SPCC) Plan.

D. REPORTING REQUIREMENTS

Unless otherwise specified in this Permit, the Permittee shall submit reports, requests, and information and provide notices in the manner described in this section.

1. Submittal of DMRs Using NetDMR

   The Permittee shall continue to submit its monthly monitoring data in discharge monitoring reports (DMRs) to EPA and the State electronically using NetDMR no later than the 15th day of the month following the monitoring period. When the Permittee submits DMRs using NetDMR, it is not required to submit hard copies of DMRs to EPA or the State. NetDMR is accessible through EPA's Central Data Exchange at https://cdx.epa.gov/.

2. Submittal of Reports as NetDMR Attachments

   Unless otherwise specified in this Permit, the Permittee shall electronically submit all reports to EPA as NetDMR attachments rather than as hard copies. See Part I.D.5 for more information on State reporting. Because the due dates for reports described in this Permit may not coincide with the due date for submitting DMRs (which is no later than the 15th day of the month following the monitoring period), a report submitted electronically as a NetDMR attachment shall be considered timely if it is electronically submitted to EPA using NetDMR with the next DMR due following the particular report due date specified in this Permit.

3. Submittal of Requests and Reports to EPA Water Division (WD)

   a. The following requests, reports, and information described in this Permit shall be submitted to the NPDES Applications Coordinator in EPA WD:

      (1) Transfer of Permit notice;
      (2) Request for changes in sampling location;
      (3) SWPPP and SPCC Plan, and other reports and documentation, if requested;
      (4) Request to discharge new chemicals or additives; and
      (5) Report on unacceptable dilution water/request for alternative dilution water for WET testing.

   b. These reports, information, and requests shall be submitted to EPA WD electronically at R1NPDESReporting@epa.gov.

4. Written Notifications

   Written notifications required under Part II, Standard Conditions must be done electronically using EPA's NPDES Electronic Reporting Tool ("NeT"), or another approved EPA system that will be accessible through EPA's Central Data Exchange at https://cdx.epa.gov/.

5. State Reporting

   Duplicate signed copies of all WET test reports shall be submitted to the Massachusetts Department of Environmental Protection, Division of Watershed Management, at the following address:

Massachusetts Department of Environmental Protection
Bureau of Water Resources
Division of Watershed Management
8 New Bond Street
Worcester, Massachusetts 01606

5. Verbal Reports and Verbal Notifications

   a. Any verbal reports or verbal notifications, if required in Parts I and/or II of this Permit, shall be made to both EPA and to the State. This includes verbal reports and notifications that require reporting within 24 hours (e.g., Part II.B.4.c. (2), Part II.B.5.c. (3), and Part II.D.1.e.).

   b. Verbal reports and verbal notifications shall be made to EPA's Enforcement and Compliance Assurance Division (ECAD) at: **617-918-1510**

   c. Verbal reports and verbal notifications shall be made to the State's Emergency Response at: **888-304-1133**

E. STATE 401 CERTIFICATION CONDITIONS

This Permit is in the process of receiving State water quality certification issued by the State under § 401(a) of the CWA and 40 CFR § 124.53. EPA will incorporate all State water quality certification requirements (if any) into the Final Permit.

[NOTE: See Parts 2.2.5 and 5.3 of the Fact Sheet for more details regarding the state certification requirements.]

USEPA REGION 1 FRESHWATER ACUTE
TOXICITY TEST PROCEDURE AND PROTOCOL

I. GENERAL REQUIREMENTS

The permittee shall conduct acceptable acute toxicity tests in accordance with the appropriate test protocols described below:

- **Daphnid (Ceriodaphnia dubia) definitive 48 hour test.**
- **Fathead Minnow (Pimephales promelas) definitive 48 hour test.**

Acute toxicity test data shall be reported as outlined in Section VIII.

II. METHODS

The permittee shall use 40 CFR Part 136 methods. Methods and guidance may be found at:

https://www.epa.gov/cwa-methods/whole-effluent-toxicity-methods

The permittee shall also meet the sampling, analysis and reporting requirements included in this protocol. This protocol defines more specific requirements while still being consistent with the Part 136 methods. If, due to modifications of Part 136, there are conflicting requirements between the Part 136 method and this protocol, the permittee shall comply with the requirements of the Part 136 method.

III. SAMPLE COLLECTION

A discharge sample shall be collected. Aliquots shall be split from the sample, containerized and preserved (as per 40 CFR Part 136) for chemical and physical analyses required. The remaining sample shall be measured for total residual chlorine and dechlorinated (if detected) in the laboratory using sodium thiosulfate for subsequent toxicity testing. (Note that EPA approved test methods require that samples collected for metals analyses be preserved immediately after collection.) Grab samples must be used for pH, temperature, and total residual chlorine (as per 40 CFR Part 122.21).

Standard Methods for the Examination of Water and Wastewater describes dechlorination of samples (APHA, 1992). Dechlorination can be achieved using a ratio of 6.7 mg/L anhydrous sodium thiosulfate to reduce 1.0 mg/L chlorine. If dechlorination is necessary, a thiosulfate control (maximum amount of thiosulfate in lab control or receiving water) must also be run in the WET test.

All samples held overnight shall be refrigerated at 1- 6^{o}C.

IV. DILUTION WATER

A grab sample of dilution water used for acute toxicity testing shall be collected from the receiving water at a point immediately upstream of the permitted discharge's zone of influence at a reasonably accessible location. Avoid collection near areas of obvious road or agricultural runoff, storm sewers or other point source discharges and areas where stagnant conditions exist. In the case where an alternate dilution water has been agreed upon an additional receiving water control (0% effluent) must also be tested.

If the receiving water diluent is found to be, or suspected to be toxic or unreliable, an alternate standard dilution water of known quality with a hardness, pH, conductivity, alkalinity, organic carbon, and total suspended solids similar to that of the receiving water may be substituted **AFTER RECEIVING WRITTEN APPROVAL FROM THE PERMIT ISSUING AGENCY(S)**.

Written requests for use of ADW with supporting documentation must be sent electronically to the NPDES Applications Coordinator in EPA Water Division (WD) at the following email address:

R1NPDESReporting@epa.gov

Note: USEPA Region 1 retains the right to modify any part of the alternate dilution water policy stated in this protocol at any time. Any changes to this policy will be documented in the annual DMR posting.

See the EPA Region 1 website at https://www.epa.gov/aboutepa/epa-region-1-new-england (click on NPDES, EPA Permit Attachments, Self-Implementing Alternate Dilution Water Guidance) for important details on alternate dilution water substitution requests.

EPA NEW ENGLAND EFFLUENT TOXICITY TEST CONDITIONS FOR THE DAPHNID, CERIODAPHNIA DUBIA 48 HOUR ACUTE TESTS[1]

1.	Test type	Static, non-renewal
2.	Temperature (^{o}C)	20 + 1^{o}C or 25 + 1^{o}C
3.	Light quality	Ambient laboratory illumination
4.	Photoperiod	16 hour light, 8 hour dark
5.	Test chamber size	Minimum 30 ml
6.	Test solution volume	Minimum 15 ml
7.	Age of test organisms	1-24 hours (neonates)
8.	No. of daphnids per test chamber	5
9.	No. of replicate test chambers per treatment	4
10.	Total no. daphnids per test concentration	20
11.	Feeding regime	As per manual, lightly feed YCT and Selenastrum to newly released organisms while holding prior to initiating test
12.	Aeration	None
13.	Dilution water[2]	Receiving water, other surface water, synthetic water adjusted to the hardness and alkalinity of the receiving water (prepared using either Millipore Milli-Q^{R} or equivalent deionized water and reagent grade chemicals according to EPA acute toxicity test manual) or deionized water combined with mineral water to appropriate hardness.
14.	Dilution series	≥ 0.5, must bracket the permitted RWC
15.	Number of dilutions	5 plus receiving water and laboratory water control and thiosulfate control, as necessary. An additional dilution at the permitted effluent concentration (% effluent) is required if it is not included in the dilution series.

16.	Effect measured	Mortality-no movement of body or appendages on gentle prodding
17.	Test acceptability	90% or greater survival of test organisms in dilution water control solution
18.	Sampling requirements	For on-site tests, samples must be used within 24 hours of the time that they are removed from the sampling device. For off-site tests, samples must first be used within 36 hours of collection.
19.	Sample volume required	Minimum 1 liter

Footnotes:

1. Adapted from EPA-821-R-02-012.
2. Standard prepared dilution water must have hardness requirements to generally reflect the characteristics of the receiving water.

EPA NEW ENGLAND TEST CONDITIONS FOR THE FATHEAD MINNOW (PIMEPHALES PROMELAS) 48 HOUR ACUTE TEST[1]

1.	Test Type	Static, non-renewal
2.	Temperature (^{o}C)	20 + 1 ^{o} C or 25 + 1^{o}C
3.	Light quality	Ambient laboratory illumination
4.	Photoperiod	16 hr light, 8 hr dark
5.	Size of test vessels	250 mL minimum
6.	Volume of test solution	Minimum 200 mL/replicate
7.	Age of fish	1-14 days old and age within 24 hrs of each other
8.	No. of fish per chamber	10
9.	No. of replicate test vessels per treatment	4
10.	Total no. organisms per concentration	40
11.	Feeding regime	As per manual, lightly feed test age larvae using concentrated brine shrimp nauplii while holding prior to initiating test
12.	Aeration	None, unless dissolved oxygen (D.O.) concentration falls below 4.0 mg/L, at which time gentle single bubble aeration should be started at a rate of less than 100 bubbles/min. (Routine D.O. check is recommended.)
13.	dilution water[2]	Receiving water, other surface water, synthetic water adjusted to the hardness and alkalinity of the receiving water (prepared using either Millipore Milli-Q^{R} or equivalent deionized and reagent grade chemicals according to EPA acute toxicity test manual) or deionized water combined with mineral water to appropriate hardness.
14.	Dilution series	> 0.5, must bracket the permitted RWC

15.	Number of dilutions	5 plus receiving water and laboratory water control and thiosulfate control, as necessary. An additional dilution at the permitted effluent concentration (% effluent) is required if it is not included in the dilution series.
16.	Effect measured	Mortality-no movement on gentle prodding
17.	Test acceptability	90% or greater survival of test organisms in dilution water control solution
18.	Sampling requirements	For on-site tests, samples must be used within 24 hours of the time that they are removed from the sampling device. For off-site tests, samples are used within 36 hours of collection.
19.	Sample volume required	Minimum 2 liters

Footnotes:

1. Adapted from EPA-821-R-02-012
2. Standard dilution water must have hardness requirements to generally reflect characteristics of the receiving water.

VI. CHEMICAL ANALYSIS

At the beginning of a static acute toxicity test, pH, conductivity, total residual chlorine, oxygen, hardness, alkalinity and temperature must be measured in the highest effluent concentration and the dilution water. Dissolved oxygen, pH and temperature are also measured at 24 and 48 hour intervals in all dilutions. The following chemical analyses shall be performed on the 100 percent effluent sample and the upstream water sample for each sampling event.

Parameter	Effluent	Receiving Water	ML (mg/l)
Hardness[1]	x	x	0.5
Total Residual Chlorine (TRC)[2, 3]	x		0.02
Alkalinity	x	x	2.0
pH	x	x	--
Specific Conductance	x	x	--
Total Solids	x		--
Total Dissolved Solids	x		--
Ammonia	x	x	0.1
Total Organic Carbon	x	x	0.5
Total Metals			
Cd	x	x	0.0005
Pb	x	x	0.0005
Cu	x	x	0.003
Zn	x	x	0.005
Ni	x	x	0.005
Al	x	x	0.02
Other as permit requires			

Notes:

1. Hardness may be determined by:
   - APHA Standard Methods for the Examination of Water and Wastewater , 21st Edition
     - Method 2340B (hardness by calculation)
     - Method 2340C (titration)
2. Total Residual Chlorine may be performed using any of the following methods provided the required minimum limit (ML) is met.
   - APHA Standard Methods for the Examination of Water and Wastewater , 21st Edition
     - Method 4500-CL E Low Level Amperometric Titration
     - Method 4500-CL G DPD Colorimetric Method
3. Required to be performed on the sample used for WET testing prior to its use for toxicity testing.

VII. TOXICITY TEST DATA ANALYSIS

LC50 Median Lethal Concentration (Determined at 48 Hours)

Methods of Estimation:

- Probit Method
- Spearman-Karber
- Trimmed Spearman-Karber
- Graphical

See the flow chart in Figure 6 on p. 73 of EPA-821-R-02-012 for appropriate method to use on a given data set.

No Observed Acute Effect Level (NOAEL)

See the flow chart in Figure 13 on p. 87 of EPA-821-R-02-012.

VIII. TOXICITY TEST REPORTING

A report of the results will include the following:

- Description of sample collection procedures, site description
- Names of individuals collecting and transporting samples, times and dates of sample collection and analysis on chain-of-custody
- General description of tests: age of test organisms, origin, dates and results of standard toxicant tests; light and temperature regime; other information on test conditions if different than procedures recommended. Reference toxicant test data should be included.
- All chemical/physical data generated. (Include minimum detection levels and minimum quantification levels.)
- Raw data and bench sheets.
- Provide a description of dechlorination procedures (as applicable).
- Any other observations or test conditions affecting test outcome.

NPDES PART II STANDARD CONDITIONS
(April 26, 2018)[1]

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[1] Updated July 17, 2018 to fix typographical errors.

A. GENERAL REQUIREMENTS

1. Duty to Comply

The Permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act (CWA or Act) and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

a. The Permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.

b. Penalties for Violations of Permit Conditions: The Director will adjust the civil and administrative penalties listed below in accordance with the Civil Monetary Penalty Inflation Adjustment Rule (83 Fed. Reg. 1190-1194 (January 10, 2018) and the 2015 amendments to the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461 note. See Pub. L.114-74, Section 701 (Nov. 2, 2015)). These requirements help ensure that EPA penalties keep pace with inflation. Under the above-cited 2015 amendments to inflationary adjustment law, EPA must review its statutory civil penalties each year and adjust them as necessary.

(1) Criminal Penalties

(a) *Negligent Violations.* The CWA provides that any person who negligently violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to criminal penalties of not less than $2,500 nor more than $25,000 per day of violation, or imprisonment of not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation or by imprisonment of not more than 2 years, or both.

(b) *Knowing Violations.* The CWA provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a fine of not less than $5,000 nor more than $50,000 per day of violation, or by imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than 6 years, or both.

(c) *Knowing Endangerment.* The CWA provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 303, 306, 307, 308, 318, or 405 of the Act and who knows at that time that he or she is placing another person in imminent danger of death or serious bodily injury shall upon conviction be subject to a fine of not more than $250,000 or by imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing

endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in Section 309(c)(3)(B)(iii) of the Act, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions.

(d) *False Statement.* The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both. The Act further provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

(2) *Civil Penalties*. The CWA provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a civil penalty not to exceed the maximum amounts authorized by Section 309(d) of the Act, the 2015 amendments to the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461 note, and 40 C.F.R. Part 19. *See* Pub. L.114-74, Section 701 (Nov. 2, 2015); 83 Fed. Reg. 1190 (January 10, 2018).

(3) *Administrative Penalties*. The CWA provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to an administrative penalty as follows:

(a) *Class I Penalty.* Not to exceed the maximum amounts authorized by Section 309(g)(2)(A) of the Act, the 2015 amendments to the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461 note, and 40 C.F.R. Part 19. *See* Pub. L.114-74, Section 701 (Nov. 2, 2015); 83 Fed. Reg. 1190 (January 10, 2018).

(b) *Class II Penalty.* Not to exceed the maximum amounts authorized by Section 309(g)(2)(B) of the Act the 2015 amendments to the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461 note, and 40 C.F.R. Part 19. *See* Pub. L.114-74, Section 701 (Nov. 2, 2015); 83 Fed. Reg. 1190 (January 10, 2018).

2. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit

condition.

3. Duty to Provide Information

The Permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

4. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the Permittee from responsibilities, liabilities or penalties to which the Permittee is or may be subject under Section 311 of the CWA, or Section 106 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA).

5. Property Rights

This permit does not convey any property rights of any sort, or any exclusive privilege.

6. Confidentiality of Information

a. In accordance with 40 C.F.R. Part 2, any information submitted to EPA pursuant to these regulations may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission in the manner prescribed on the application form or instructions or, in the case of other submissions, by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the information will be treated in accordance with the procedures in 40 C.F.R. Part 2 (Public Information).

b. Claims of confidentiality for the following information will be denied:

(1) The name and address of any permit applicant or Permittee;
(2) Permit applications, permits, and effluent data.

c. Information required by NPDES application forms provided by the Director under 40 C.F.R. § 122.21 may not be claimed confidential. This includes information submitted on the forms themselves and any attachments used to supply information required by the forms.

7. Duty to Reapply

If the Permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the Permittee must apply for and obtain a new permit. The Permittee shall submit a new application at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Director. (The Director shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)

8. State Authorities

Nothing in Parts 122, 123, or 124 precludes more stringent State regulation of any activity

covered by the regulations in 40 C.F.R. Parts 122, 123, and 124, whether or not under an approved State program.

9. Other Laws

The issuance of a permit does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations.

B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance

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 adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a Permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

2. Need to Halt or Reduce Not a Defense

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

3. Duty to Mitigate

The Permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

4. Bypass

a. Definitions

(1) *Bypass* means the intentional diversion of waste streams from any portion of a treatment facility.

(2) *Severe property damage* means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. *Bypass not exceeding limitations.* The Permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs (c) and (d) of this Section.

c. Notice

(1) *Anticipated bypass*. If the Permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass. As of December 21, 2020 all notices submitted in compliance with this Section must be submitted electronically by the Permittee to the Director or initial recipient, as defined in 40 C.F.R. § 127.2(b), in compliance with this Section and 40 C.F.R. Part 3 (including, in all cases, Subpart D to Part 3), § 122.22, and 40 C.F.R. Part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of Part 127, Permittees may be required to report electronically if specified by a particular permit or if required to do so by state law.

(2) *Unanticipated bypass*. The Permittee shall submit notice of an unanticipated bypass as required in paragraph D.1.e. of this part (24-hour notice). As of December 21, 2020 all notices submitted in compliance with this Section must be submitted electronically by the Permittee to the Director or initial recipient, as defined in 40 C.F.R. § 127.2(b), in compliance with this Section and 40 C.F.R. Part 3 (including, in all cases, Subpart D to Part 3), § 122.22, and 40 C.F.R. Part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of Part 127, Permittees may be required to report electronically if specified by a particular permit or required to do so by law.

d. *Prohibition of bypass.*

(1) Bypass is prohibited, and the Director may take enforcement action against a Permittee for bypass, unless:

(a) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and

(c) The Permittee submitted notices as required under paragraph 4.c of this Section.

(2) The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in paragraph 4.d of this Section.

5. Upset

a. *Definition*. *Upset* means an exceptional incident in which there is an unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or

improper operation.

b. *Effect of an upset.* An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph B.5.c. of this Section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

c. *Conditions necessary for a demonstration of upset.* A Permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

(1) An upset occurred and that the Permittee can identify the cause(s) of the upset;
(2) The permitted facility was at the time being properly operated; and
(3) The Permittee submitted notice of the upset as required in paragraph D.1.e.2.b. (24-hour notice).
(4) The Permittee complied with any remedial measures required under B.3. above.

d. *Burden of proof.* In any enforcement proceeding the Permittee seeking to establish the occurrence of an upset has the burden of proof.

C. MONITORING REQUIREMENTS

1. Monitoring and Records

a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

b. 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 5 years (or longer as required by 40 C.F.R. § 503), the Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart 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 may be extended by request of the Director at any time.

c. Records of monitoring information shall include:

(1) The date, exact place, and time of sampling or measurements;
(2) The individual(s) who performed the sampling or measurements;
(3) The date(s) analyses were performed;
(4) The individual(s) who performed the analyses;
(5) The analytical techniques or methods used; and
(6) The results of such analyses.

d. Monitoring must be conducted according to test procedures approved under 40 C.F.R. § 136 unless another method is required under 40 C.F.R. Subchapters N or O.

e. The Clean Water Act provides that any person who falsifies, tampers with, or

knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both.

2. Inspection and Entry

The Permittee shall allow the Director, or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon presentation of credentials and other documents as may be required by law, to:

a. Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

D. REPORTING REQUIREMENTS

1. Reporting Requirements

a. *Planned Changes*. The Permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

(1) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 C.F.R. § 122.29(b); or

(2) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements at 40 C.F.R. § 122.42(a)(1).

(3) The alteration or addition results in a significant change in the Permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

b. *Anticipated noncompliance*. The Permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

c. *Transfers.* This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the Permittee and incorporate such other requirements as may be necessary under the Clean Water Act. *See* 40 C.F.R. § 122.61; in some cases, modification or revocation and reissuance is mandatory.

d. *Monitoring reports*. Monitoring results shall be reported at the intervals specified elsewhere in this permit.

(1) Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Director for reporting results of monitoring of sludge use or disposal practices. As of December 21, 2016 all reports and forms submitted in compliance with this Section must be submitted electronically by the Permittee to the Director or initial recipient, as defined in 40 C.F.R. § 127.2(b), in compliance with this Section and 40 C.F.R. Part 3 (including, in all cases, Subpart D to Part 3), § 122.22, and 40 C.F.R. Part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of Part 127, Permittees may be required to report electronically if specified by a particular permit or if required to do so by State law.

(2) If the Permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 C.F.R. § 136, or another method required for an industry-specific waste stream under 40 C.F.R. Subchapters N or O, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Director.

(3) Calculations for all limitations which require averaging or measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.

e. *Twenty-four hour reporting.*

(1) The Permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Permittee becomes aware of the circumstances. A written report shall also be provided within 5 days of the time the Permittee becomes aware of the circumstances. The written report shall contain a description of the noncompliance and its cause; 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 steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports must include the data described above (with the exception of time of discovery) as well as the type of event (combined sewer overflows, sanitary sewer overflows, or bypass events), type of sewer overflow structure (e.g., manhole, combined sewer overflow outfall), discharge volumes untreated by the treatment works treating domestic sewage, types of human health and environmental impacts of the sewer overflow event, and whether the noncompliance was related to wet weather. As of December 21, 2020 all

reports related to combined sewer overflows, sanitary sewer overflows, or bypass events submitted in compliance with this section must be submitted electronically by the Permittee to the Director or initial recipient, as defined in 40 C.F.R. § 127.2(b), in compliance with this Section and 40 C.F.R. Part 3 (including, in all cases Subpart D to Part 3), § 122.22, and 40 C.F.R. Part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of Part 127, Permittees may be required to electronically submit reports related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section by a particular permit or if required to do so by state law. The Director may also require Permittees to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section.

(2) The following shall be included as information which must be reported within 24 hours under this paragraph.

(a) Any unanticipated bypass which exceeds any effluent limitation in the permit. *See* 40 C.F.R. § 122.41(g).
(b) Any upset which exceeds any effluent limitation in the permit.
(c) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in the permit to be reported within 24 hours. *See* 40 C.F.R. § 122.44(g).

(3) The Director may waive the written report on a case-by-case basis for reports under paragraph D.1.e. of this Section if the oral report has been received within 24 hours.

f. *Compliance Schedules.* Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

g. *Other noncompliance.* The Permittee shall report all instances of noncompliance not reported under paragraphs D.1.d., D.1.e., and D.1.f. of this Section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph D.1.e. of this Section. For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports shall contain the information described in paragraph D.1.e. and the applicable required data in Appendix A to 40 C.F.R. Part 127. As of December 21, 2020 all reports related to combined sewer overflows, sanitary sewer overflows, or bypass events submitted in compliance with this section must be submitted electronically by the Permittee to the Director or initial recipient, as defined in 40 C.F.R. § 127.2(b), in compliance with this Section and 40 C.F.R. Part 3 (including, in all cases, Subpart D to Part 3), §122.22, and 40 C.F.R. Part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of Part 127, Permittees may be required to electronically submit reports related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section by a particular permit or if required to do so by state law. The Director may also require Permittees to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this Section.

h. *Other information.* Where the Permittee becomes aware that it failed to submit any

relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

i. *Identification of the initial recipient for NPDES electronic reporting data*. The owner, operator, or the duly authorized representative of an NPDES-regulated entity is required to electronically submit the required NPDES information (as specified in Appendix A to 40 C.F.R. Part 127) to the appropriate initial recipient, as determined by EPA, and as defined in 40 C.F.R. § 127.2(b). EPA will identify and publish the list of initial recipients on its Web site and in the FEDERAL REGISTER, by state and by NPDES data group (see 40 C.F.R. § 127.2(c) of this Chapter). EPA will update and maintain this listing.

2. Signatory Requirement

a. All applications, reports, or information submitted to the Director shall be signed and certified. *See* 40 C.F.R. §122.22.

b. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

3. Availability of Reports.

Except for data determined to be confidential under paragraph A.6. above, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the State water pollution control agency and the Director. As required by the CWA, effluent data shall not be considered confidential. Knowingly making any false statements on any such report may result in the imposition of criminal penalties as provided for in Section 309 of the CWA.

E. DEFINITIONS AND ABBREVIATIONS

1. General Definitions

For more definitions related to sludge use and disposal requirements, see EPA Region 1's NPDES Permit Sludge Compliance Guidance document (4 November 1999, modified to add regulatory definitions, April 2018).

Administrator means the Administrator of the United States Environmental Protection Agency, or an authorized representative.

Applicable standards and limitations means all, State, interstate, and federal standards and limitations to which a "discharge," a "sewage sludge use or disposal practice," or a related activity is subject under the CWA, including "effluent limitations," water quality standards, standards of performance, toxic effluent standards or prohibitions, "best management practices," pretreatment standards, and "standards for sewage sludge use or disposal" under Sections 301, 302, 303, 304, 306, 307, 308, 403 and 405 of the CWA.

Application means the EPA standard national forms for applying for a permit, including any additions, revisions, or modifications to the forms; or forms approved by EPA for use in

"approved States," including any approved modifications or revisions.

Approved program or *approved State* means a State or interstate program which has been approved or authorized by EPA under Part 123.

Average monthly discharge limitation means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month.

Average weekly discharge limitation means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week.

Best Management Practices ("BMPs") means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of "waters of the United States." BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Bypass see B.4.a.1 above.

C-NOEC or *"Chronic (Long-term Exposure Test) – No Observed Effect Concentration" means* the highest tested concentration of an effluent or a toxicant at which no adverse effects are observed on the aquatic test organisms at a specified time of observation.

Class I sludge management facility is any publicly owned treatment works (POTW), as defined in 40 C.F.R. § 501.2, required to have an approved pretreatment program under 40 C.F.R. § 403.8 (a) (including any POTW located in a State that has elected to assume local program responsibilities pursuant to 40 C.F.R. § 403.10 (e)) and any treatment works treating domestic sewage, as defined in 40 C.F.R. § 122.2, classified as a Class I sludge management facility by the EPA Regional Administrator, or, in the case of approved State programs, the Regional Administrator in conjunction with the State Director, because of the potential for its sewage sludge use or disposal practice to affect public health and the environment adversely.

Contiguous zone means the entire zone established by the United States under Article 24 of the Convention on the Territorial Sea and the Contiguous Zone.

Continuous discharge means a "discharge" which occurs without interruption throughout the operating hours of the facility, except for infrequent shutdowns for maintenance, process changes, or similar activities.

CWA means the Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Public Law 92-500, as amended by Public Law 95-217, Public Law 95-576, Public Law 96-483and Public Law 97-117, 33 U.S.C. 1251 *et seq*.

CWA and regulations means the Clean Water Act (CWA) and applicable regulations promulgated thereunder. In the case of an approved State program, it includes State program requirements.

Daily Discharge means the "discharge of a pollutant" measured during a calendar day or any

other 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurements, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

Direct Discharge means the "discharge of a pollutant."

Director means the Regional Administrator or an authorized representative. In the case of a permit also issued under Massachusetts' authority, it also refers to the Director of the Division of Watershed Management, Department of Environmental Protection, Commonwealth of Massachusetts.

Discharge

(a) When used without qualification, *discharge* means the "discharge of a pollutant."

(b) As used in the definitions for "interference" and "pass through," *discharge* means the introduction of pollutants into a POTW from any non-domestic source regulated under Section 307(b), (c) or (d) of the Act.

Discharge Monitoring Report ("DMR") means the EPA uniform national form, including any subsequent additions, revisions, or modifications for the reporting of self-monitoring results by Permittees. DMRs must be used by "approved States" as well as by EPA. EPA will supply DMRs to any approved State upon request. The EPA national forms may be modified to substitute the State Agency name, address, logo, and other similar information, as appropriate, in place of EPA's.

Discharge of a pollutant means:

(a) Any addition of any "pollutant" or combination of pollutants to "waters of the United States" from any "point source," or

(b) Any addition of any pollutant or combination of pollutants to the waters of the "contiguous zone" or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation.

This definition includes additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. This term does not include an addition of pollutants by any "indirect discharger."

Effluent limitation means any restriction imposed by the Director on quantities, discharge rates, and concentrations of "pollutants" which are "discharged" from "point sources" into "waters of the United States," the waters of the "contiguous zone," or the ocean.

Effluent limitation guidelines means a regulation published by the Administrator under section 304(b) of CWA to adopt or revise "effluent limitations."

Environmental Protection Agency ("EPA") means the United States Environmental Protection

Agency.

Grab Sample means an individual sample collected in a period of less than 15 minutes.

Hazardous substance means any substance designated under 40 C.F.R. Part 116 pursuant to Section 311 of CWA.

Incineration is the combustion of organic matter and inorganic matter in sewage sludge by high temperatures in an enclosed device.

Indirect discharger means a nondomestic discharger introducing "pollutants" to a "publicly owned treatment works."

Interference means a discharge (see definition above) which, alone or in conjunction with a discharge or discharges from other sources, both:

(a) Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and

(b) Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resources Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to Subtitle D of the SDWA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

Landfill means an area of land or an excavation in which wastes are placed for permanent disposal, and that is not a land application unit, surface impoundment, injection well, or waste pile.

Land application is the spraying or spreading of sewage sludge onto the land surface; the injection of sewage sludge below the land surface; or the incorporation of sewage sludge into the soil so that the sewage sludge can either condition the soil or fertilize crops or vegetation grown in the soil.

Land application unit means an area where wastes are applied onto or incorporated into the soil surface (excluding manure spreading operations) for agricultural purposes or for treatment and disposal.

LC_{50} means the concentration of a sample that causes mortality of 50% of the test population at a specific time of observation. The LC_{50} = 100% is defined as a sample of undiluted effluent.

Maximum daily discharge limitation means the highest allowable "daily discharge."

Municipal solid waste landfill (MSWLF) unit means a discrete area of land or an excavation that receives household waste, and that is not a land application unit, surface impoundment, injection well, or waste pile, as those terms are defined under 40 C.F.R. § 257.2. A MSWLF unit also may receive other types of RCRA Subtitle D wastes, such as commercial solid waste, nonhazardous sludge, very small quantity generator waste and industrial solid waste. Such a landfill may be

publicly or privately owned. A MSWLF unit may be a new MSWLF unit, an existing MSWLF unit or a lateral expansion. A construction and demolition landfill that receives residential lead-based paint waste and does not receive any other household waste is not a MSWLF unit.

Municipality

(a) When used without qualification *municipality* means a city, town, borough, county, parish, district, association, or other public body created by or under State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under Section 208 of CWA.

(b) As related to sludge use and disposal, *municipality* means a city, town, borough, county, parish, district, association, or other public body (including an intermunicipal Agency of two or more of the foregoing entities) created by or under State law; an Indian tribe or an authorized Indian tribal organization having jurisdiction over sewage sludge management; or a designated and approved management Agency under Section 208 of the CWA, as amended. The definition includes a special district created under State law, such as a water district, sewer district, sanitary district, utility district, drainage district, or similar entity, or an integrated waste management facility as defined in Section 201 (e) of the CWA, as amended, that has as one of its principal responsibilities the treatment, transport, use or disposal of sewage sludge.

National Pollutant Discharge Elimination System means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 402, 318, and 405 of the CWA. The term includes an "approved program."

New Discharger means any building, structure, facility, or installation:

(a) From which there is or may be a "discharge of pollutants;"

(b) That did not commence the "discharge of pollutants" at a particular "site" prior to August 13, 1979;

(c) Which is not a "new source;" and

(d) Which has never received a finally effective NPDES permit for discharges at that "site."

This definition includes an "indirect discharger" which commences discharging into "waters of the United States" after August 13, 1979. It also includes any existing mobile point source (other than an offshore or coastal oil and gas exploratory drilling rig or a coastal oil and gas exploratory drilling rig or a coastal oil and gas exploratory drilling rig or a coastal oil and gas developmental drilling rig) such as a seafood processing rig, seafood processing vessel, or aggregate plant, that begins discharging at a "site" for which it does not have a permit; and any offshore or coastal mobile oil and gas exploratory drilling rig or coastal mobile oil and gas developmental drilling rig that commences the discharge of pollutants after August 13, 1979, at a "site" under EPA's permitting jurisdiction for which it is not covered by an individual or general permit and which is located in an area determined by the Director in the issuance of a final permit to be in an area of biological concern. In determining whether an area is an area of biological concern, the Director shall consider the factors specified in 40 C.F.R. §§ 125.122 (a) (1) through (10).

An offshore or coastal mobile exploratory drilling rig or coastal mobile developmental drilling rig will be considered a "new discharger" only for the duration of its discharge in an area of biological concern.

New source means any building, structure, facility, or installation from which there is or may be a "discharge of pollutants," the construction of which commenced:

(a) After promulgation of standards of performance under Section 306 of CWA which are applicable to such source, or

(b) After proposal of standards of performance in accordance with Section 306 of CWA which are applicable to such source, but only if the standards are promulgated in accordance with Section 306 within 120 days of their proposal.

NPDES means "National Pollutant Discharge Elimination System."

Owner or operator means the owner or operator of any "facility or activity" subject to regulation under the NPDES programs.

Pass through means a Discharge (see definition above) which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).

Pathogenic organisms are disease-causing organisms. These include, but are not limited to, certain bacteria, protozoa, viruses, and viable helminth ova.

Permit means an authorization, license, or equivalent control document issued by EPA or an "approved State" to implement the requirements of Parts 122, 123, and 124. "Permit" includes an NPDES "general permit" (40 C.F.R § 122.28). "Permit" does not include any permit which has not yet been the subject of final agency action, such as a "draft permit" or "proposed permit."

Person means an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof.

Person who prepares sewage sludge is either the person who generates sewage sludge during the treatment of domestic sewage in a treatment works or the person who derives a material from sewage sludge.

pH means the logarithm of the reciprocal of the hydrogen ion concentration measured at 25° Centigrade or measured at another temperature and then converted to an equivalent value at 25° Centigrade.

Point Source means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff (see 40 C.F.R. § 122.3).

Pollutant means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials

(except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 *et seq*.)), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water. It does not mean:

(a) Sewage from vessels; or

(b) Water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil and gas production and disposed of in a well, if the well is used either to facilitate production or for disposal purposes is approved by the authority of the State in which the well is located, and if the State determines that the injection or disposal will not result in the degradation of ground or surface water resources.

Primary industry category means any industry category listed in the NRDC settlement agreement (*Natural Resources Defense Council et al. v. Train*, 8 E.R.C. 2120 (D.D.C. 1976), *modified* 12 E.R.C. 1833 (D.D.C. 1979)); also listed in Appendix A of 40 C.F.R. Part 122.

Privately owned treatment works means any device or system which is (a) used to treat wastes from any facility whose operator is not the operator of the treatment works and (b) not a "POTW."

Process wastewater means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

Publicly owned treatment works (POTW) means a treatment works as defined by Section 212 of the Act, which is owned by a State or municipality (as defined by Section 504(4) of the Act). This definition includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW Treatment Plant. The term also means the municipality as defined in Section 502(4) of the Act, which has jurisdiction over the indirect discharges to and the discharges from such a treatment works.

Regional Administrator means the Regional Administrator, EPA, Region I, Boston, Massachusetts.

Secondary industry category means any industry which is not a "primary industry category."

Septage means the liquid and solid material pumped from a septic tank, cesspool, or similar domestic sewage treatment system, or a holding tank when the system is cleaned or maintained.

Sewage Sludge means any solid, semi-solid, or liquid residue removed during the treatment of municipal waste water or domestic sewage. Sewage sludge includes, but is not limited to, solids removed during primary, secondary, or advanced waste water treatment, scum, septage, portable toilet pumpings, type III marine sanitation device pumpings (33 C.F.R. Part 159), and sewage sludge products. Sewage sludge does not include grit or screenings, or ash generated during the incineration of sewage sludge.

Sewage sludge incinerator is an enclosed device in which only sewage sludge and auxiliary fuel are fired.

Sewage sludge unit is land on which only sewage sludge is placed for final disposal. This does

not include land on which sewage sludge is either stored or treated. Land does not include waters of the United States, as defined in 40 C.F.R. § 122.2.

Sewage sludge use or disposal practice means the collection, storage, treatment, transportation, processing, monitoring, use, or disposal of sewage sludge.

Significant materials includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substance designated under Section 101(14) of CERCLA; any chemical the facility is required to report pursuant to Section 313 of title III of SARA; fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with storm water discharges.

Significant spills includes, but is not limited to, releases of oil or hazardous substances in excess of reportable quantities under Section 311 of the CWA (see 40 C.F.R. §§ 110.10 and 117.21) or Section 102 of CERCLA (*see* 40 C.F.R. § 302.4).

Sludge-only facility means any "treatment works treating domestic sewage" whose methods of sewage sludge use or disposal are subject to regulations promulgated pursuant to section 405(d) of the CWA, and is required to obtain a permit under 40 C.F.R. § 122.1(b)(2).

State means any of the 50 States, the District of Columbia, Guam, the Commonwealth of Puerto Rico, the Virgin Islands, American Samoa, the Commonwealth of the Northern Mariana Islands, the Trust Territory of the Pacific Islands, or an Indian Tribe as defined in the regulations which meets the requirements of 40 C.F.R. § 123.31.

Store or storage of sewage sludge is the placement of sewage sludge on land on which the sewage sludge remains for two years or less. This does not include the placement of sewage sludge on land for treatment.

Storm water means storm water runoff, snow melt runoff, and surface runoff and drainage.

Storm water discharge associated with industrial activity means the discharge from any conveyance that is used for collecting and conveying storm water and that is directly related to manufacturing, processing, or raw materials storage areas at an industrial plant.

Surface disposal site is an area of land that contains one or more active sewage sludge units.

Toxic pollutant means any pollutant listed as toxic under Section 307(a)(1) or, in the case of "sludge use or disposal practices," any pollutant identified in regulations implementing Section 405(d) of the CWA.

Treatment works treating domestic sewage means a POTW or any other sewage sludge or waste water treatment devices or systems, regardless of ownership (including federal facilities), used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated for the disposal of sewage sludge. This definition does not include septic tanks or similar devices.

For purposes of this definition, "domestic sewage" includes waste and waste water from humans or household operations that are discharged to or otherwise enter a treatment works. In States where there is no approved State sludge management program under Section 405(f) of the CWA, the Director may designate any person subject to the standards for sewage sludge use and

disposal in 40 C.F.R. Part 503 as a "treatment works treating domestic sewage," where he or she finds that there is a potential for adverse effects on public health and the environment from poor sludge quality or poor sludge handling, use or disposal practices, or where he or she finds that such designation is necessary to ensure that such person is in compliance with 40 C.F.R. Part 503.

Upset see B.5.a. above.

Vector attraction is the characteristic of sewage sludge that attracts rodents, flies, mosquitoes, or other organisms capable of transporting infectious agents.

Waste pile or *pile* means any non-containerized accumulation of solid, non-flowing waste that is used for treatment or storage.

Waters of the United States or waters of the U.S. means:

(a) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

(b) All interstate waters, including interstate "wetlands;"

(c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands", sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:

    (1) Which are or could be used by interstate or foreign travelers for recreational or other purpose;

    (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or

    (3) Which are used or could be used for industrial purposes by industries in interstate commerce;

(d) All impoundments of waters otherwise defined as waters of the United States under this definition;

(e) Tributaries of waters identified in paragraphs (a) through (d) of this definition;

(f) The territorial sea; and

(g) "Wetlands" adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 C.F.R. § 423.11(m) which also meet the criteria of this definition) are not waters of the United States. This exclusion applies only to manmade bodies of water which neither were originally created in waters of the United States (such as disposal area in wetlands) nor resulted from the impoundment of waters of the United States. Waters of the United States do not include prior converted cropland.

Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA.

Wetlands means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Whole Effluent Toxicity (WET) means the aggregate toxic effect of an effluent measured directly by a toxicity test.

*Zone of Initial Dilution (*ZID) means the region of initial mixing surrounding or adjacent to the end of the outfall pipe or diffuser ports, provided that the ZID may not be larger than allowed by mixing zone restrictions in applicable water quality standards.

2. Commonly Used Abbreviations

BOD	Five-day biochemical oxygen demand unless otherwise specified
CBOD	Carbonaceous BOD
CFS	Cubic feet per second
COD	Chemical oxygen demand
Chlorine	
Cl_2	Total residual chlorine
TRC	Total residual chlorine which is a combination of free available chlorine (FAC, see below) and combined chlorine (chloramines, etc.)
TRO	Total residual chlorine in marine waters where halogen compounds are present
FAC	Free available chlorine (aqueous molecular chlorine, hypochlorous acid, and hypochlorite ion)
Coliform	
Coliform, Fecal	Total fecal coliform bacteria
Coliform, Total	Total coliform bacteria
Cont.	Continuous recording of the parameter being monitored, i.e. flow, temperature, pH, etc.
Cu. M/day or M^3/day	Cubic meters per day
DO	Dissolved oxygen

kg/day	Kilograms per day
lbs/day	Pounds per day
mg/L	Milligram(s) per liter
mL/L	Milliliters per liter
MGD	Million gallons per day
Nitrogen	
Total N	Total nitrogen
NH_3-N	Ammonia nitrogen as nitrogen
NO_3-N	Nitrate as nitrogen
NO_2-N	Nitrite as nitrogen
NO_3-NO_2	Combined nitrate and nitrite nitrogen as nitrogen
TKN	Total Kjeldahl nitrogen as nitrogen
Oil & Grease	Freon extractable material
PCB	Polychlorinated biphenyl
Surfactant	Surface-active agent
Temp. °C	Temperature in degrees Centigrade
Temp. °F	Temperature in degrees Fahrenheit
TOC	Total organic carbon
Total P	Total phosphorus
TSS or NFR	Total suspended solids or total nonfilterable residue
Turb. or Turbidity	Turbidity measured by the Nephelometric Method (NTU)
µg/L	Microgram(s) per liter
WET	"Whole effluent toxicity"
ZID	Zone of Initial Dilution

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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FACT SHEET

DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES PURSUANT TO THE CLEAN WATER ACT (CWA)

NPDES PERMIT NUMBER: MA0020231

PUBLIC NOTICE START AND END DATES: January 14, 2025 – February 13, 2025

NAME AND MAILING ADDRESS OF APPLICANT:

Granite State Concrete Co., Inc.
534 Groton Road
Westford, MA 01886

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Granite State Concrete Co., Inc.
534 Groton Road
Westford, MA 01886

RECEIVING WATER AND CLASSIFICATION:

Gilson Brook Pond (part of Gilson Brook), tributary to Stony Brook (MA84B-04)
Merrimack River Watershed
Class B

SIC CODE: 1411 (Dimension Stone)
NAICS CODE: 212311 (Dimension Stone Mining and Quarrying)

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Appendices

1.0 Proposed Action

Granite State Concrete Company, Inc. (GSC, or "Permittee") has applied to the U.S. Environmental Protection Agency (EPA) for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit to authorize pollutant discharges from the Granite State Concrete Company (the "Facility") into Gilson Brook Pond, a tributary of Stony Brook.

The permit currently in effect was issued on June 24, 2010, with an effective date of September 1, 2010, and expired on August 31, 2015 (the "2010 Permit"). The Permittee filed an application seeking NPDES permit reissuance from EPA dated February 18, 2015, as required by 40 Code of Federal Regulations (CFR) § 122.6. Since the permit application was deemed timely and complete by EPA on April 16, 2015, the Facility's 2010 Permit has been administratively continued pursuant to 40 CFR § 122.6 and § 122.21(d). EPA and Massachusetts Department of Environmental Protection (MassDEP or the "State") conducted a site visit on November 15, 2018 ("2018 Site Visit"). Two more recent visits by EPA occurred on January 25, 2023 ("2023 Inspection") and July 12, 2023 ("2023 Site Visit").

2.0 Statutory and Regulatory Authority for Setting NPDES Permit Requirements

Congress enacted the Federal Water Pollution Control Act, codified at 33 U.S.C. §§ 1251 – 1387 and commonly known as the Clean Water Act (CWA), "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." CWA § 101(a). To achieve this objective, the CWA makes it unlawful for any person to discharge any pollutant into the waters of the United States from any point source, except to the extent authorized under specific provisions of the CWA, one of which is § 402. *See* CWA §§ 301(a), 402(a). Section 402(a) established one of the CWA's principal permitting programs, the NPDES Permit Program. Under this section, EPA may "issue a permit for the discharge of any pollutant or combination of pollutants" on the condition that the discharge will comply with the standards specified in certain other provisions of the statute (e.g., CWA §§ 301, 306 and 403). CWA § 402(a)(1). NPDES permits generally contain discharge limitations and establish related monitoring and reporting requirements. *See* CWA § 402(a)(1) and (2). The regulations governing EPA's NPDES permit program are generally found in 40 CFR Parts 122, 124, 125, and 136.

"Congress has vested in the Administrator [of EPA] broad discretion to establish conditions for NPDES permits" in order to achieve the statutory mandates of Sections 301 and 402 of the CWA. *Arkansas v. Oklahoma,* 503 U.S. 91, 105 (1992). Technology-based effluent limitations (TBELs) represent the minimum level of pollutant discharge control that must be satisfied under Sections 301(b) and 402(a)(1) of the CWA. *See also* 40 CFR § 125.3(a). When limits more stringent than technology-based limits are needed to maintain or achieve compliance with state water quality standards (WQS), then NPDES permit must include water quality-based effluent limits (QBELs). *See* CWA §§ 301(b)(1)(C) and 401; 40 CFR §§ 122.4(d), 122.44(d)(1) and (5), 124.53, and 124.55.

2.1 Technology-Based Requirements

NPDES permit limits must, at a minimum, satisfy applicable federal technology standards under the CWA. CWA §§ 301(b), 304(b) and 402(a); 40 CFR § 125.3(a). The statute specifies several different narrative technology standards that apply to different types of pollutants. Technology-based effluent limitations are set to reflect the greatest degree of pollution control that can be achieved by using a technology that satisfies the applicable technology standard. Effluent limitations based on the best practicable control technology currently available (BPT) standard apply to "conventional pollutants" under certain circumstances, while effluent limitations applied to conventional pollutants are otherwise based on the best conventional control technology standard (BCT). *See* CWA §§ 301(b)(2)(E) and 304(a)(4), (b)(1) and (b)(4). *See also* 40 CFR §§ 125.3(a)(2)(i) and (ii). Effluent limitations based on best available technology economically achievable (BAT) apply to toxic and non-conventional pollutants. *See* CWA § 301(b)(1)(A) and (b)(2)(A) – (D) and (F), and 304(b)(2); 40 CFR §§ 125.3(a)(iii) and (iv); and 401.12. If a discharger is a "new source" under Section 306 of the CWA, 33 U.S.C. § 1316, however, then it must meet new source standards based on the "best available demonstrated technology" (BADT). *See also* 40 CFR §§ 122.2 (definition of "new source") and 122.29.

Subpart A of 40 CFR Part 125 establishes criteria and standards for developing and applying technology-based requirements in permits under § 301(b) and 402(a) of the CWA. Where EPA has established national effluent limitation guidelines (ELGs) for an industrial category or subcategory, permit limits for a facility within that category are set by applying the limits from the national guideline. 40 CFR § 125.3(c)(1). *See also* CWA § 402(a)(1)(A). Where EPA has not yet promulgated an applicable national ELG, then the permitting authority develops permit limits based on a facility-specific, Best Professional Judgment (BPJ) application of the relevant technology standard. 40 CFR § 125.3(c)(2). *See also* CWA § 402(a)(1)(B). Where national ELGs have been promulgated for some, but not all, of the pollutants regulated by the permit, limits are set using the appropriate approach for each pollutant. 40 CFR § 125.3(c)(3). Section 402(p) of the CWA, 33 U.S.C. § 1342(p) requires stormwater discharges associated with industrial activity to be authorized by a NPDES permit. *See also* 40 CFR § 122.26(a)(1)(ii).

Facilities other than publicly owned sewage treatment plants must generally comply with technology standards as expeditiously as practicable but in no case later than either three years after the date such limitations are established or March 31, 1989, whichever comes first. *See* 40 CFR § 125.3(a)(2). NPDES permits may not include compliance schedules inconsistent with a CWA statutory compliance deadline. 40 CFR§ 122.47(a)(1).

2.2 Water Quality-Based Requirements

The CWA and EPA regulations require that NPDES permits include effluent limits based on water quality considerations when such limits are necessary to meet state or federal WQS that apply to the body of water that receives the discharge. Such water quality-based limits are necessary when less stringent TBELs would be less stringent and would interfere with the

attainment or maintenance of WQS in the receiving water. *See* CWA § 301(b)(1)(C) and 40 CFR §§ 122.44(d)(1),122.44(d)(5), 125.84(e) and 125.94(i).

2.2.1 Water Quality Standards

The CWA requires that each state develop water quality standards (WQSs) for all water bodies within the State. *See* CWA § 303 and 40 CFR §§ 131.10 – 131.12. Generally, WQSs consist of three parts: 1) beneficial designated use or uses for a water body or a segment of a water body; 2) numeric or narrative water quality criteria sufficient to protect the assigned designated use(s); and 3) antidegradation requirements to ensure that once a use is attained it will not be degraded and to protect high quality and National resource waters. *See* CWA § 303(c)(2)(A) and 40 CFR § 131.12. The applicable State WQSs can be found in Title 314 of the Code of Massachusetts Regulations, Chapter 4 (314 CMR 4.00).

As a matter of state law, state WQSs specify different water body classifications, each of which is associated with certain designated uses and particular numeric and narrative water quality criteria intended to help attain the designated uses. Then the state assigns one of the water body classifications to each water body in the state. When using chemical-specific numeric criteria to develop permit limitations, acute and chronic aquatic life criteria and human health criteria are used and expressed in terms of maximum allowable in-stream pollutant concentrations. In general, aquatic-life acute criteria are considered applicable to daily time periods (maximum daily limit) and aquatic-life chronic criteria are considered applicable to monthly time periods (average monthly limit). Chemical-specific human health criteria are typically based on lifetime chronic exposure and, therefore, are typically applicable to monthly average limits.

When permit effluent limitation(s) are necessary to ensure that the receiving water meets narrative water quality criteria, the permitting authority must establish effluent limits in one of the following three ways: 1) based on a "calculated numeric criterion for the pollutant which the permitting authority demonstrates will attain and maintain applicable narrative water quality criteria and fully protect the designated use," 2) based on a "case-by-case" assessment using CWA § 304(a) recommended water quality criteria, supplemented as necessary by other relevant information; or 3) in certain circumstances, based on use of an indicator parameter. *See* 40 CFR § 122.44(d)(1)(vi)(A) – (C).

2.2.2 Antidegradation

Federal regulations found at 40 CFR § 131.12 require states to develop and adopt a statewide antidegradation policy that maintains and protects existing in-stream water uses and the level of water quality necessary to protect these existing uses. In addition, the antidegradation policy ensures maintenance of high-quality waters which exceed levels necessary to support propagation of fish, shellfish, and wildlife and to support recreation in and on the water, unless

the State finds that allowing degradation is necessary to accommodate important economic or social development in the area in which the waters are located.

Massachusetts' statewide antidegradation policy, entitled "Antidegradation Provisions," is found in the State's WQSs at 314 CMR 4.04. Massachusetts guidance for the implementation of this policy is in an associated document entitled "Implementation Procedures for the Antidegradation Provisions of the Massachusetts Surface Water Quality Standards, 314 CMR 4.00," dated October 21, 2009. According to the policy, no lowering of water quality is allowed, except in accordance with the antidegradation policy, and all existing in-stream uses, and the level of water quality necessary to protect the existing uses of a receiving water body must be maintained and protected.

This permit is being reissued with effluent limitations sufficiently stringent to satisfy the State's antidegradation requirements, including the protection of the existing uses of the receiving water.

2.2.3 Assessment and Listing of Waters and Total Maximum Daily Loads

The objective of the CWA is to restore and maintain the chemical, physical and biological integrity of the Nation's waters. To meet this goal, the CWA requires states to develop information on the quality of their water resources and report this information to EPA, the U.S. Congress, and the public. To this end, EPA released guidance on November 19, 2001, for the preparation of an integrated "List of Waters" that could combine reporting elements of both § 305(b) and § 303(d) of the CWA. The integrated list format allows states to provide the status of all their assessed waters in one list. States choosing this option must list each water body or segment in one of the following five categories: 1) unimpaired and not threatened for all designated uses; 2) unimpaired waters for some uses and not assessed for others; 3) insufficient information to make assessments for any uses; 4) impaired or threatened for one or more uses but not requiring the calculation of a Total Maximum Daily Load (TMDL); and 5) impaired or threatened for one or more uses and requiring a TMDL.

A TMDL is a planning tool and potential starting point for restoration activities with the ultimate goal of attaining water quality standards. A TMDL essentially provides a pollution budget designed to restore the health of an impaired water body. A TMDL typically identifies the source(s) of the pollutant from point sources and non-point sources, determines the maximum load of the pollutant that the water body can tolerate while still attaining WQSs for the designated uses, and allocates that load among the various sources, including point source discharges, subject to NPDES permits. *See* 40 CFR § 130.7.

For impaired waters where a TMDL has been developed for a particular pollutant and the TMDL includes a waste load allocation (WLA) for a NPDES permitted discharge, the effluent limitation in the permit must be "consistent with the assumptions and requirements of any available WLA". 40 CFR § 122.44(d)(1)(vii)(B).

2.2.4 Reasonable Potential

Pursuant to CWA § 301(b)(1)(C), 33 U.S.C. § 1311(b)(1)(C), and 40 CFR § 122.44(d)(1), NPDES permits must include any requirements in addition to TBELs that are necessary to achieve water quality standards established under § 303 of the CWA. In addition, limits "must control any pollutant or pollutant parameter (conventional, non-conventional, or toxic) which the permitting authority determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any water quality standard, including State narrative criteria for water quality." 40 CFR § 122.44(d)(1)(i). To determine if the discharge causes, or has the reasonable potential to cause, or contribute to an excursion above any WQS, EPA considers: 1) existing controls on point and non-point sources of pollution; 2) the variability of the pollutant or pollutant parameter in the effluent; 3) the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity); and 4) where appropriate, the dilution of the effluent by the receiving water. *See* 40 CFR § 122.44(d)(1)(ii).

If the permitting authority determines that the discharge of a pollutant will cause, has the reasonable potential to cause, or contribute to an excursion above WQSs, the permit must contain WQBELs for that pollutant. *See* 40 CFR § 122.44(d)(1)(i).

2.2.5 State Certification

EPA may not issue a permit unless the State Water Pollution Control Agency with jurisdiction over the receiving water(s) either certifies that the effluent limitations contained in the permit are stringent enough to assure that the discharge will not cause the receiving water to violate the State's WQSs, or the State waives, or is deemed to have waived, its right to certify. *See* 33 U.S.C. § 1341(a)(1). Regulations governing state certification are set forth in 40 CFR § 124.53 and § 124.55. EPA has requested permit certification by the State pursuant to 40 CFR § 124.53 and expects that the Draft Permit will be certified.

If the State believes that conditions more stringent than those contained in the Draft Permit are necessary to meet the requirements of either CWA §§ 208(e), 301, 302, 303, 306 and 307, or applicable requirements of State law, the State should include such conditions in its certification. The only exception to this is that the permit conditions/requirements regulating sewage sludge management and implementing CWA § 405(d) are not subject to the State certification requirements. Reviews and appeals of limitations and conditions attributable to State certification shall be made through the applicable procedures of the State and may not be made through EPA's permit appeal procedures of 40 CFR Part 124.

In addition, the State may provide a statement of the extent to which any condition of the Draft Permit can be made less stringent without violating the requirements of State law, including water quality standards.

It should be noted that under CWA § 401, EPA's duty to defer to considerations of State law is intended to prevent EPA from relaxing any requirements, limitations or conditions imposed by State law. Therefore, "[a] State may not condition or deny a certification on the grounds that State law allows a less stringent permit condition." 40 CFR § 124.55(c). In such an instance, the regulation provides that, "The Regional Administrator shall disregard any such certification conditions or denials as waivers of certification." *Id.* EPA regulations pertaining to permit limitations based upon WQSs and State requirements are contained in 40 CFR §§ 122.4(d) and 122.44(d).

See Section 5.3 below for a detailed discussion of the expected state certification conditions and the potential impact to the permit. Note that the draft state certification will also be made available for public comment[1] by the State separately from this Draft Permit as part of the permit reissuance process. EPA does not have authority to make changes to the state certification conditions. Any comments regarding the draft state certification conditions should be made directly to MassDEP as part of that separate public notice.

2.3 Effluent Flow Requirements

Generally, EPA uses a discharger's effluent flow volume both to determine whether an NPDES permit needs certain effluent limitations and to calculate the effluent limitations themselves. EPA practice is to use effluent flow as a reasonable and important worst-case condition in its reasonable potential and WQBEL calculations to ensure compliance with WQSs under CWA § 301(b)(1)(C). Should a facility's effluent flow exceed the flow assumed in these calculations, the in-stream dilution would be reduced, and the calculated effluent limitations might not be sufficiently protective (i.e., might not meet WQSs). Further, pollutants that do not have the reasonable potential to exceed WQSs at a lower discharge flow may have a reasonable potential to do so at a higher flow due to the decreased dilution in the receiving water (which, conversely, means there will be a higher concentration of the pollutants). In order to ensure that the assumptions underlying EPA's reasonable potential analyses and permit effluent limitation derivations remain sound for the duration of the permit, EPA may ensure the validity of its "worst-case" effluent flow assumptions through imposition of permit conditions for effluent flow.[2] In this regard, the effluent flow limitation is a component of any WQBELs because the WQBELs are premised on a maximum flow level. The effluent flow limit may also

[1] Once the public notice period for the MassDEP's draft 401 certification begins, it will be posted here: https://www.mass.gov/info-details/massdep-permits-approvals-for-comment. Following MassDEP's public notice period, the draft certification will be moved to here: https://www.mass.gov/info-details/massachusetts-draft-individual-surface-water-discharge-permits-and-associated-documents.

[2] EPA's regulations regarding "reasonable potential" require EPA to consider "where appropriate, the dilution of the effluent in the receiving water," *id.* 40 CFR §122.44(d)(1)(ii). *Both* the effluent flow and receiving water flow may be considered when assessing reasonable potential. *In re Upper Blackstone Water Pollution Abatement Dist.*, 14 E.A.D. 577, 599 (EAB 2010). EPA guidance directs that this "reasonable potential" analysis be based on "worst-case" conditions. *See In re Washington Aqueduct Water Supply Sys., 11 E.A.D. 565, 584 (EAB 2004)*.

be necessary to ensure that other pollutants remain at levels that do not have a reasonable potential to exceed WQSs.

Setting limits on effluent flow volumes is within EPA's authority to condition a permit to carry out the objectives and satisfy the requirements of the CWA. *See* CWA §§ 402(a)(2) and 301(b)(1)(C); 40 CFR §§ 122.4(a) and (d), 122.43 and 122.44(d). Regulating the quantity of pollutants in the discharge through a restriction on the quantity of effluent is also consistent with EPA's authorities under the CWA.

As provided in Part II.B.1 (Standard Conditions) of the proposed permit and 40 CFR § 122.41(e), the Permittee is required to properly operate and maintain all facilities and systems of treatment and control. Improper operation and maintenance may result in non-compliance with permit effluent limitations. Consequently, tan effluent flow limit is a permit condition that relates to the Permittee's duty to mitigate (*i.e.*, minimize or prevent any discharge in violation of the permit that has a reasonable likelihood of adversely affecting human health or the environment) and to properly operate and maintain the treatment works. *See* 40 CFR §§ 122.41(d), (e).

2.4 Monitoring and Reporting Requirements

2.4.1 Monitoring Requirements

Sections 308(a) and 402(a)(2) of the CWA and the implementing regulations at 40 CFR Parts 122, 124, 125, and 136 authorize EPA to include monitoring and reporting requirements in NPDES permits.

The monitoring requirements included in this permit have been established to yield data representative of the Facility's discharges in accordance with CWA §§ 308(a) and 402(a)(2), and consistent with 40 CFR §§ 122.41(h), (j) and (1)(9), 122.43(a), 122.44(i) and 122.48. The Draft Permit specifies routine sampling and analysis requirements to provide ongoing, representative information on the levels of regulated constituents in the discharges. The monitoring program is needed to enable EPA and the State to assess the characteristics of the Facility's effluent, whether Facility discharges are complying with permit limits, and whether different permit conditions may be necessary in the future to ensure compliance with technology-based and water quality-based standards under the CWA. EPA and/or the State may use the results of the chemical analyses conducted pursuant to this permit, as well as national water quality criteria developed pursuant to CWA § 304(a)(1), State water quality criteria, and any other appropriate information or data, to develop numerical effluent limitations for any pollutants, including, but not limited to, those pollutants listed in Appendix D of 40 CFR Part 122.

NPDES permits require that the approved analytical procedures found in 40 CFR Part 136 be used for sampling and analysis unless other procedures are explicitly specified. *See* 40 CFR § 122.41(j)(4). Permits also include requirements necessary to comply with the *National Pollutant*

Discharge Elimination System (NPDES): Use of Sufficiently Sensitive Test Methods for Permit Applications and Reporting Rule.[3] This Rule requires that where EPA-approved methods exist, NPDES applicants must use sufficiently sensitive EPA-approved analytical methods when quantifying the presence of pollutants in a discharge. Further, the permitting authority must prescribe that only sufficiently sensitive EPA-approved methods be used for analyses of pollutants or pollutant parameters under the permit. The NPDES regulations at 40 CFR § 122.21(e)(3) (completeness), 40 CFR § 122.44(i)(1)(iv) (monitoring requirements) and/or as cross referenced at 40 CFR § 136.1(c) (applicability) indicate that an EPA-approved method is sufficiently sensitive where:

- The method minimum level[4] (ML) is at or below the level of the effluent limitation established in the permit for the measured pollutant or pollutant parameter; or
- In the case of permit applications, the ML is above the applicable water quality criterion, but the amount of the pollutant or pollutant parameter in a facility's discharge is high enough that the method detects and quantifies the level of the pollutant or parameter in the discharge; or
- The method has the lowest ML of the analytical methods approved under 40 CFR Part 136 or required under 40 CFR chapter I, subchapter N or O for the measured pollutant or pollutant parameter.

2.4.2 Reporting Requirements

The Draft Permit requires the Permittee to report monitoring results obtained during each calendar month to EPA and the State electronically using NetDMR. The Permittee must submit a Discharge Monitoring Report (DMR) for each calendar month no later than the 15th day of the month following the completed reporting period.

NetDMR is a national web-based tool enabling regulated CWA permittees to submit DMRs electronically via a secure internet application to EPA through the Environmental Information Exchange Network. NetDMR has eliminated the need for participants to mail in paper forms to EPA under 40 CFR §§ 122.41 and 403.12. NetDMR is accessible through EPA's Central Data Exchange at https://cdx.epa.gov/. Further information about NetDMR can be found on EPA's NetDMR support portal webpage.[5]

[3] Fed. Reg. 49,001 (Aug. 19, 2014).
[4] The term "minimum level" refers to either the sample concentration equivalent to the lowest calibration point in a method or a multiple of the method detection limit (MDL), whichever is higher. Minimum levels may be obtained in several ways: They may be published in a method; they may be based on the lowest acceptable calibration point used by a laboratory; or they may be calculated by multiplying the MDL in a method, or the MDL determined by a laboratory, by a factor. EPA is considering the following terms related to analytical method sensitivity to be synonymous: "quantitation limit," "reporting limit," "level of quantitation," and "minimum level." *See* Fed. Reg. 49,001 (Aug. 19, 2014).
[5] https://netdmr.zendesk.com/hc/en-us

With the use of NetDMR, the Permittee is no longer required to submit hard copies of DMRs and reports to EPA and the State unless otherwise specified in the permit. In most cases, reports required under the permit shall be submitted to EPA as an electronic attachment through NetDMR. Exceptions are provided in the permit such as for providing certain reports, information, and requests to EPA's NPDES Applications Coordinator in the Water Division and written notifications required under Part II Standard Conditions.

2.5 Standard Conditions

The Standard Conditions, included as Part II of the Draft Permit, are based on applicable regulations found in EPA's NPDES permitting regulations. *See* 40 CFR Part 122.41. *See also, generally*, 40 CFR Part 122.

2.6 Anti-backsliding

The CWA's anti-backsliding requirements prohibit a permit from being renewed, reissued or modified with conditions less stringent than the corresponding conditions in a previous permit issued to the same facility unless doing so is authorized by one of the specified exceptions to the anti-backsliding requirements. *See* CWA §§ 402(o) and 303(d)(4) and 40 CFR § 122.44(*l*). Anti-backsliding provisions apply to effluent limits based on technology, water quality, and/or State certification requirements.

All proposed limitations in the Draft Permit are at least as stringent as limitations included in the 2010 Permit unless specific conditions exist to justify relaxation in accordance with CWA § 402(o) or § 303(d)(4). Discussion of any less stringent limitations and corresponding exceptions to anti-backsliding provisions is provided in the sections that follow.

3.0 Description of Facility and Discharge

3.1 Location and Type of Facility

The Permittee quarries dimension stone, specifically Chelmsford Grey granite, at its facility located at 534 Groton Road in Westford, Middlesex County, Massachusetts. As shown in the location map provided as Figure 1, the quarry is located north of Groton Road. Water collects at the bottom of the quarry and is used for lubricating and cooling the wire saws that cut the granite. Granite slabs are cut in a two-step process using saws first at either end of a target slab and then through the slab itself. The amount of water needed is directly related to the number of saws being used. Quarry water is also used to washdown the ledge faces of the quarry and the stones slabs being removed. Records indicate that the former owners of the quarry, Fletcher Granite Company LLC, previously H.E. Fletcher Company, created a large man-made impoundment known as Gilson Brook Pond, located southwest of the quarry, by damming Gilson Brook around 1936, for the purpose of providing a source of cooling water for the granite-cutting saws and that Fletcher Granite discharged quarry process and quarry

stormwater to the brook below this cooling water supply pond. *See* Appendix B. Figure 2 is a site plan of the Facility that shows certain features discussed in this Fact Sheet. During the 2023 Inspection, EPA observed that the pumps used to move water from Gilson Brook Pond to the quarry were disconnected. According to John MacLellan, the owner of GSC, there is enough water in the quarry for cooling saws and ledge washing. *See* S. DeMeo 2023 Inspection Notes. Mr. MacLellan explained that, so few saws are used now, compared to years past. Therefore, the water that naturally collects in the quarry is sufficient for cooling, obviating the need to withdraw water Gilson Brook Pond.

The Permittee also manages a ready-mix concrete operation on the property, located adjacent to Gilson Brook Pond. Stone from the quarry that is crushed and screened at a location just west of the quarry and north of the ready-mix concrete area is used in the manufacturing of the concrete. EPA and MassDEP were told during the 2018 Site Visit and EPA was told again during the 2023 Inspection that stone was crushed and screened but was *not* washed. However, EPA was informed that water is pumped into tank trucks from Gilson Pond and transferred to the crushing operation for use as dust control, which is considered process wastewater. During the January 25, 2023, inspection, EPA observed that just west of the rock crushing equipment was a large relatively shallow depression that contained a significant volume of water. *See* Figure 4. John MacLellan asserted that what was "observed on January 25, 2023 was storm water which normally drains to the west to the lower quarry hole and/or flows through cracks or fractures in the quarry floor at the crushing plant level." May 10, 2023, letter to EPA from GSC in response to EPA's Request for Information, Pursuant to Section 308 of the Clean Water Act, dated April 7, 2023. At the time, EPA saw no evidence that this depression flowed into the quarry. However, during EPA's next 2023 Site Visit, EPA observed that a large channel had been excavated running west to east towards the quarry from the depression and an opening had been excavated in the hillside adjacent to the road leading into the quarry. There was evidence that the once ponded water had flowed through this channel, down the roadway and into the quarry. *See* Figure 5. *See also* July 13, 2023, Site Visit Memorandum, from S. DeMeo to Granite State Concrete NPDES Permit File.

In the ready-mix area concrete trucks are washed out and the wash water flows through a series of four settling basins. Water from the fourth settling basin is reused in concrete production. John MacLellan maintained that the ready-mix concrete operation involved the complete recycle of wash water resulting in no discharge. There was evidence seen during the 2018 Site Visit, however, that the wash water holding tanks had overflowed to the ground bordering the tanks. In addition, during the 2023 Inspection, the only extensive area devoid of ice on Gilson Pond was that adjacent to the ready-mix operation. The Draft Permit prohibits the discharge of any ready-mix area process water to Gilson Brook Pond. *See* Draft Permit, Part I.B.4. GSC would need to apply for and obtain a permit modification to discharge from the wash water holding tanks or any other process water generated by the ready-mix concrete operation.

There is a discharge pipe located on the bank of Gilson Brook Pond several yards upstream (west) of the ready-mix operation that discharges stormwater to the pond. This discharge is

covered by EPA's MSGP (Permit No. MAR053686) and TSS samples are collected quarterly at this outfall location. See Figure 2 for the location of the stormwater outfall pipe. GSC's Notice of Intent (NOI) filed with EPA in 2021, to be eligible for coverage under the MSGP, identifies the sectors and subsectors that apply to the stormwater discharges from the Facility, including:

Subsector J2 - Dimension Stone; Crushed and Broken Stone, Including Rip Rap; Nonmetallic Minerals Serv ices, Except Fuels, and
Subsector E2 - Concrete, Gypsum, and Plaster Product.

The MSGP includes sector-specific requirements such as good housekeeping measures and general stormwater management requirements that must be included in their Storm Water Pollution Prevention Plan (SWPPP). Therefore, the Draft Permit does not include requirements on stormwater management practices. That said, however, EPA found that GSC's SWPPP was outdated and has required that an updated SWPPP, as well as a copy of the Facility's Spill Prevention, Control, and Countermeasure (SPCC) Plan be submitted to EPA within three months of the effective date of the renewed permit. *See* Draft Permit, Part I.C.3.

The process of splitting and cutting the granite slabs into finished products takes place within a property located south and across the street from the Facility. This property is no longer owned by GSC. The 2010 Fact Sheet indicates that in

> [t]he process of cutting and splitting of granite into the finished product … water cooled diamond-tipped saws cut stone into various shapes and dimensions. Cooling water for the saws is recycled using a recycling system within the mill, with make-up water drawn from the municipal water system. A discharge line from the operation is present, but Fletcher Granite affirms that there will be no discharge from the outfall, designated Outfall 003 in the existing permit. Therefore, the draft permit terminates coverage of the discharge from Outfall 003.

3.1.1 Effluent Limitation Guidelines

EPA has promulgated technology-based National Effluent Limitation Guidelines (ELGs) for the Mineral Mining and Processing Point Source Category. *See* 40 CFR 436. The applicable subpart of these regulations for GSC (SIC codes 1411) is Subpart A—Dimension Stone Subcategory. This subpart however is "reserved," meaning no effluent limitations have been developed at this time. In accordance with Section 402(a)(1)(B) of the CWA, EPA has established effluent limitations on a case-by-case basis using BPJ. To the extent applicable to GSC, EPA has incorporated technology-based limitations and conditions based on 1) individual permits issued to similar facilities in Region 1 that discharge comparable wastewater; 2) EPA's Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (MSGP), specifically for facilities engaged in mineral mining (Sector J of the 2021 MSGP); and 3) information in the July, 1979 Development Document for Effluent Limitations Guidelines and Standards for the Mineral Mining and Processing Industry Point Source Category. EPA was not

able to evaluate the effectiveness of, and therefore develop limits based on, the use of a filter bag system, which was the technology that had been incorporated into the discharge line of the quarry and used to filter suspended solids because no monitoring was performed at this location. Instead, compliance samples have been collected at a point where the wastewater mixes with and is diluted by the receiving water. The filter bag was disconnected at some point prior to the 2018 Site Visit and removed sometime between the 2023 Inspection and the 2023 Site Visit.

3.2 Location and Type of Discharge

As previously indicated, water collects at the bottom of the quarry ("quarry water") and is used for cooling the wire saws and for ledge washing ("quarry process water"). Quarry water consists of quarry process water, rock crushing process water, groundwater and stormwater. In addition, drilling and blasting for crushed stone occurs within the western side of quarry, near the solar farm to the north of the property, approximately once per month from spring through fall (6x/year). These operations generate quarry water that contains fine stone dust and fine silicon carbide particles.

According to the 2007 Permit Application, an average of approximately 0.1 MGD and a maximum of 0.5 MGD of quarry saw-cutting process water together with approximately 0.03 MGD stormwater collects at the bottom of the quarry. See the updated water flow schematic provided in Figure 3. During the winter, when minimal to no operations occur in the quarry, a significant amount of water will accumulate, which needs to be removed each spring prior to resuming normal quarry operations. During the 2023 Site Visit, Mr. MacLellan explained that during June 2023, they had pumped and discharged water from the quarry continuously for 2-3 weeks and that this was considered the "spring pump." Going forward after the spring pump, they discharge when the level of water reaches a certain height in the quarry pond, approximately every two months for approximately four days.

Quarry water is discharged to Gilson Brook Pond, which overflows by gravity and continues as Gilson Brook, eventually flowing into Stony Brook. The existing 2010 Permit identifies the Outfall 001 sampling location as the "overflow from the quarry water supply pond to Gilson Brook," which is located at approximately Latitude 42.630125, Longitude -71.419107. Based on an extensive review of the permitting record for this Facility, EPA explains in Appendix B that this sampling point is not appropriate because the impounded Gilson Brook Pond does not qualify as a waste treatment system and is in fact a jurisdictional "water of the United States" (WOTUS) under the CWA. Therefore, Gilson Brook Pond is the proper receiving water for the discharge from the quarry and a more accurate outfall monitoring point for the Draft Permit is a location prior to the point of discharge to Gilson Brook Pond.

Quarry water is pumped out of the quarry, through a flexible pipe. The pipe terminates on the downward slope of the hill located north of Gilson Brook Pond. The flow from the pipe continues overland for a short distance and into a culvert, which runs underground and exits in

Gilson Brook Pond, below the surface water level. During the 2018 Site Visit, EPA and MassDEP observed that the discharge pipe from the quarry had been disconnected from a filter bag system for removing solids, located upstream of the culvert. Subsequently, it was explained that the quarry saw operator had "a new bag in stock that has been scheduled to replace the used bag" as the reason for the bag being disconnected. See email from John MacLellan to EPA and MassDEP dated November 16, 2028. However, during the 2023 Inspection, EPA representatives observed that the filter bag system had not been replaced as previously asserted by Mr. MacLellan. Six months later, during the 2023 Site Visit, EPA observed that the filter bag had been removed, along with a significant amount of soil in and around the area where the filter bag had been. A significant amount of crushed stone was deposited in the excavated area – from the flexible quarry discharge pipe to the culvert, approximately 25 feet. When discharging, quarry wastewater flows from the discharge pipe, downhill, over the crushed rock, into the culvert and through the underground pipe that discharges into Gilson Brook Pond. Mr. MacLellan explained that the filter bag was not needed based on sampling data. Considering the high velocity of the flow leaving the quarry discharge pipe and the likely difficulty of collecting samples there, EPA determined that the most representative and accessible location for Outfall 001 is to collect samples prior to the wastewater entering the culvert. If the Permittee decides to reinstall the filter system or any other treatment, the appropriate sampling location would be after such treatment.

A quantitative description of the discharge in terms of effluent parameters, based on monitoring data for the former Outfall 001, submitted by the Permittee, including Discharge Monitoring Reports (DMRs), from March 31, 2019, through October 31, 2024, is provided in Appendix A of this Fact Sheet. EPA notes that the data presented in Appendix A is likely not representative of the discharge from the Facility, considering samples have been collected at a point after mixing with the receiving stream, thereby having the advantage of dilution.

4.0 Description of Receiving Water and Dilution

4.1 Receiving Water

The Facility, which is made up of approximately 141 acres in Westford, Massachusetts, discharges to the impounded Gilson Brook Pond, which overflows and continues as Gilson Brook. The entire reach of Gilson Brook is a first order freshwater stream that flows from its point of origin approximately 0.9 miles upstream from the impoundment, enters the impoundment, and flows approximately 1.4 miles to its confluence with Stony Brook. The Gilson Brook Pond/Stony Brook segment is part of the Merrimack River Watershed. Stony Brook flows into the Merrimack River at approximately River Mile 43.

Gilson Brook Pond and Gilson Brook are designated as Class B in the Massachusetts WQSs, 314 Code of Massachusetts Regulations (CMR) 4.0. See 314 CMR 4.06(5) for waters not otherwise designated. The downstream 3.4-mile-long Stony Brook, (Segment ID MA84B-04) is also

designated as Class B and as a warm water fishery. Class B waters are described in the Massachusetts WQSs at 314 CMR 4.05(3)(b) as follows:

> …designated as a habitat for fish, other aquatic life, and wildlife, including for their reproduction, migration, growth and other critical functions, and for primary and secondary contact recreation. Where designated in 314 CMR 4.06, they shall be suitable as a source of public water supply with appropriate treatment (Treated Water Supply). Class B waters shall be suitable for irrigation and other agricultural uses and for compatible industrial cooling and process uses. These waters shall have consistently good aesthetic value.

Gilson Brook is not listed in the Final *Massachusetts Integrated List of Waters for the Clean Water Act 2018/2020 Reporting Cycle* (303(d) List). However, Stony Brook is listed in the 303(d) List as a Category 5 "Waters Requiring a TMDL".[6] The pollutants and conditions requiring a TMDL are benthic macroinvertebrates and *Escherichia coli* (*E. coli*). To date no TMDL has been developed for this segment for any of the listed impairments.

The status of each designated use described in the *Merrimack River Watershed 2004-2009 Water Quality Assessment Report* (WQAR)[7] for Stony Brook is presented in Table 1.

Table 1: Summary of Designated Uses and Listing Status

Designated Use	**Status**
Aquatic Life	Not Assessed
Aesthetics	Not Assessed
Primary Contact Recreation	Impaired*
Secondary Contact Recreation	Support
Fish Consumption	Not Assessed

According to the WQAR this waterbody segment is attaining designated use for secondary contact recreation, while designated uses for aquatic life, aesthetics, and fish consumption have not been assessed. This waterbody segment is impaired under the primary contact recreation designated use due to *E. coli* as a result of unspecified urban stormwater from an unknown source. Secondary contact recreation is supported, but an alert status has been identified due to occasional spikes in *E. coli*. Although the fish consumption use is listed as not assessed, the nearby Forge Pond and Nabnasset Pond have fish consumption advisories for

[6] Final *Massachusetts Integrated List of Waters for the Clean Water Act 2018/2020 Reporting Cycle.* MassDEP Division of Watershed Management Watershed Planning Program, Worcester, Massachusetts; November 2021; CN: 505.1. Available at: https://www.mass.gov/doc/final-massachusetts-integrated-list-of-waters-for-the-clean-water-act-20182020-reporting-cycle/download

[7] Water Quality Assessment Report. MassDEP Division of Watershed Management, Worcester, Massachusetts; January 2010, Report Number: 84-AC-2. https://www.mass.gov/doc/merrimack-river-watershed-2004-water-quality-assessment-report/download

largemouth bass and the Merrimack River (Segment 84A-01) has a fish consumption advisory for white sucker and largemouth bass under the Massachusetts Department of Public Health statewide fish consumption advisory for freshwater fish due to mercury.[8] Indeed, this segment of the Merrimack River is listed as impaired for fecal coliform and mercury in fish tissue and is included in the 2007 Northeast Regional Mercury TMDL for mercury in fish tissue. A draft TMDL for pathogens in the Merrimack River watershed, including *E. coli*, has not been finalized.

4.2 Available Dilution

To ensure that discharges do not cause or contribute to violations of WQSs under all expected conditions, WQBELs are derived assuming critical conditions for the receiving water.[9] The critical flow is some measure of the low flow of the receiving water and may stipulate the magnitude, duration, and frequency of allowable excursions from the magnitude component of criteria in order to prevent adverse impacts of discharges on existing and designated uses. State WQSs specify the hydrologic condition at which water quality criteria must be applied. *See* 314 CMR 4.03(3). Based on the minimal flow in Gilson Brook Pond, the State determined that there is no available dilution of the effluent in the receiving water and the dilution factor for the Facility is one (i.e., 1:1 ratio). *See* StreamStats Report, October 25, 2018.

5.0 Proposed Effluent Limitations and Conditions

The proposed effluent limitations and conditions derived under the CWA and State WQSs are described below. These proposed effluent limitations and conditions, the basis of which is discussed throughout this Fact Sheet, may be found in Part I of the Draft Permit.

In accordance with 40 CFR § 122.45(b)(2), EPA bases the calculation of effluent limitations on either the reasonable measure of actual production for a facility or the flow from the facility. EPA determined that the measure appropriate for GSC is the effluent flow. In this case, a dilution factor of one is used in the quantitative derivation of WQBELs for pollutants in the Draft Permit.

5.1 Effluent Limitations and Monitoring Requirements

State and Federal regulations and data regarding discharge characteristics were used during the effluent limitation's development process. Discharge data is included in Appendix A. As previously stated, the data presented in Appendix A is likely not representative of the discharge from the Facility, considering samples have been collected at a point after mixing with the receiving stream, thereby having the benefit of dilution by receiving water. Furthermore, Appendix A shows that approximately five- and one-half years of monthly monitoring data (68

[8] Freshwater Fish Consumption Advisory List. Massachusetts Department of Public Health Bureau of Environmental Health; July 2019. https://www.mass.gov/lists/fish-consumption-advisories
[9] EPA Permit Writer's Manual, Section 6.2.4.

months) resulted in only 22 sets of samples collected. This is likely due to the 2010 Permit's outfall location designated as the discharge of Gilson Brook Pond through the overflow culvert into lower Gilson Brook, which does not always coincide with the quarry discharges, and partly because quarry operations cease in the winter.

5.1.1 Effluent Flow

From March 1, 2019, through October 31, 2024 (Appendix A) daily maximum effluent flow has ranged from 0.6 to 1.2 MGD.[10] However, this flow represents the overflow of Gilson Brook Pond through the culvert into lower Gilson Brook and is not representative of the volume of quarry water that discharges to Gilson Brook Pond. The Facility's 2010 Permit does not limit the discharge volume or flow rate. To get a better understanding of the contribution of quarry water discharging to Gilson Brook Pond, the Draft Permit requires that the Permittee measure (or estimate based on pump capacity and duration of discharge) and record the flow rate and total monthly volume of quarry water that discharges to Gilson Brook Pond, as well as the number of discharge events per calendar month.

5.1.2 pH

The hydrogen-ion concentration in an aqueous solution is represented by the pH using a logarithmic scale of 0 to 14 standard units (S.U.). Solutions with pH 7.0 S.U. are neutral, while those with pH less than 7.0 S.U. are acidic and those with pH greater than 7.0 S.U. are basic. Discharges with pH values markedly different from the receiving water pH can have a detrimental effect on the environment. Sudden pH changes can kill aquatic life. pH can also have an indirect effect on the toxicity of other pollutants in the water.

From March 1, 2019, through October 31, 2024 (Appendix A), pH has ranged from 6.5 to 8.3 S.U. However, this flow represents the overflow of Gilson Brook Pond through the culvert into lower Gilson Brook and is not representative of the quarry water discharged to Gilson Brook Pond. The Draft Permit requires a pH range of 6.5 to 8.3 S.U. and proposes grab sample monitoring twice per month when quarry water is discharging and prior to entering Gilson Brook Pond. Sampling frequency has been increased because the Facility discharges infrequently (i.e., possibly every two months for approximately four days and not during winter months) and previous data collected is not representative of the discharge. These limitations have been continued from the Facility's 2010 Permit and are based on the State WQSs for Inland Water, Class B at 314 CMR 4.05(3)(b)3, which require that the pH of the receiving water be in the range of 6.5 to 8.3 S.U. These limitations are based on CWA § 301(b)(1)(C) and 40 CFR § 122.44(d) and comply with 40 CFR § 122.44(*l*).

[10] Note current DMR's show flow values reported as gallons per day instead of MGD. This should be corrected going forward.

5.1.3 Total Suspended Solids

Solids could include inorganic (e.g., silt, sand, clay, and insoluble hydrated metal oxides) and organic matter (e.g., flocculated colloids and compounds that contribute to color). These solids may settle or remain suspended in the water column. Excessive TSS can destroy aquatic habitats by coating the bottom of receiving waters with sediment. Suspended solids can increase turbidity in receiving waters and reduce light penetration, which impairs the photosynthetic activity of aquatic plants, thereby contributing to oxygen depletion. Suspended solids may kill fish and shellfish by causing abrasive injuries, by clogging fish gills and respiratory passages, resulting in an increase in susceptibility to infection or asphyxiation. Suspended solids also provide a medium for the transport of other adsorbed pollutants, such as metals, which may accumulate in settled deposits that can have a long-term impact on the water column through cycles of re-suspension.

From March 1, 2019, through October 31, 2024 (Appendix A), daily maximum total suspended solids (TSS) concentrations ranged from below detection limits to 11 mg/L and monthly average concentrations ranged from below detection limits to 5.37 mg/L. Again, this data is not representative of the quarry water discharging to Gilson Brook Pond. The Draft Permit contains monthly average and maximum daily TSS limitations of 20 mg/L and 40 mg/L, respectively. These limits have been continued from the Facility's 2010 Permit in accordance with anti-backsliding requirements found in 40 CFR § 122.44(*l*) and were originally established using BPJ pursuant to § 402(a)(1) of the CWA based on a treatment system technology for the removal of solids.

The Draft Permit proposes composite sample monitoring of quarry water for TSS twice per month when quarry water is discharging and prior to entering Gilson Brook Pond. As explained above, monitoring frequency has been increased to account for the lack of representative sampling data and infrequency of discharges.

5.1.4 Turbidity

Turbidity is a measure of relative water clarity, with relatively higher turbidity corresponding to relatively lower water clarity. Materials such as inorganic matter (e.g., silt, sand, and clay), organisms (e.g., algae, plankton, and microbes) and detritus can contribute turbidity. Highly turbid water can influence the amount of dissolved oxygen in the water by decreasing light penetration in the water, in turn reducing photosynthesis, by increasing water temperature as suspended particles absorb heat, or by oxygen depletion as bacteria consume dead plant matter. These materials can also have physical effects on aquatic life and waterbodies, clogging fish gills, reducing growth and disease resistance, and smothering fish eggs and benthic macroinvertebrates, and causing sedimentation that may alter the nature of bottom sediments.

From March 1, 2019, through October 31, 2024 (Appendix A), daily maximum turbidity concentrations have ranged from 0.7 nephelometric turbidity units (NTUs) to 11 NTUs and

monthly average turbidity concentrations ranged from 0.63 NTUs to 7.75 NTUs. Once more, as described above, this data is not representative of the quarry water that discharges to Gilson Brook Pond. The 2010 Permit includes a monthly average turbidity limitation of 25 NTUs and a maximum daily limit of 50 NTUs.

EPA considered information in accordance with 40 CFR §122.44(d)(1)(ii) to determine if discharges of turbidity from the Facility causes, or has the reasonable potential to cause, or contribute to an excursion above State WQSs. Considering 1) the Facility's operation, which involves the generation and limited treatment of fine solids; 2) aquatic macroinvertebrate bioassessments are a listed cause of the aquatic life impairment to Stony Brook, located downstream from the Facility; 3) no available dilution and 4) several satellite photos showing high turbidity of the water in the quarry and, at times, Gilson Brook Pond, EPA determined the discharge of turbidity from the Facility has a reasonable potential to cause or contribute to an excursion above State WQSs for color and turbidity (314 CMR 4.05(3)(b)6) and aesthetics (314 CMR 4.05(5)(a)). Therefore, the Draft Permit retains the 2010 Permit's monthly average limit in accordance with anti-backsliding requirements found in 40 CFR § 122.44(l) and includes a daily maximum turbidity limit of 25 NTUs in accordance with 40 CFR § 122.44(d)(1)(iii) and based on certification requirements under § 401(a)(1) of the CWA, as described in 40 CFR §§ 124.53 and 124.55.

EPA selected the proposed daily maximum water quality-based limitation for turbidity based on State WQSs for Inland Water, Class B at 314 CMR 4.05(3)(b), which states, *"These waters shall be free from color and turbidity in concentrations or combinations that are aesthetically objectionable..."* In addition, State WQSs applicable to all waters at 314 CMR 4.05(5)(a) states, *"All surface waters shall be free from pollutants in concentrations or combinations that settle to form objectionable deposits; float as debris, scum or other matter to form nuisances; produce objectionable odor, color, taste or turbidity; or produce undesirable or nuisance species of aquatic life."* A turbidity value of 25 NTUs is consistent with the upstream turbidity cited in EPA's *Quality Criteria for Water* to explain major increases in stream suspended solids.[11] This value is also consistent with several states that have established numeric water quality criteria for turbidity, including the New England state of Vermont[12] as well as the turbidity limitations imposed on similar facilities in Massachusetts and New Hampshire.

The Draft Permit proposes grab sample monitoring of quarry water for turbidity, twice per month when quarry water is discharging and prior to entering Gilson Brook Pond, based on the lack of representative data, infrequency of discharge, and reasonable potential to cause, or contribute to an excursion above State WQSs. Consistent with the existing permit, the Permittee is required to collect three grab samples and report the resultant average. However, instead of simply collecting the grab samples during one day per calendar month, the grabs

[11] EPA 440/5-86-001, May 1, 1986. Solids (Suspended, Settleable) and Turbidity, p. 270 of 395.
[12] *See* Vermont Water Quality Standards, Subchapter 3, § 29A-302(4), effective November 15, 2022, found at https://dec.vermont.gov/sites/dec/files/documents/2022-Vermont-Water-Quality-Standards.pdf

samples shall be collected during the beginning, middle and end of each discharge event, which can occur over a period of more or less than 24 hours. Spacing the grab samples over the duration of the discharge event should provide a more representative depiction of the effluent, as opposed to possibly collecting three grab samples within a short time frame.

5.1.5 Nitrogen

Nitrogen is an essential nutrient for plant growth. However, elevated concentrations of nitrogen can result in eutrophication, where nutrient concentrations lead to excessive plant and algal growth. Respiration and decomposition of plants and algae under eutrophic conditions reduce dissolved oxygen concentrations below levels necessary to support aquatic life. Some forms of nitrogen can be directly toxic to aquatic life at high concentrations, depending on temperature and pH conditions.

The Massachusetts Surface Water Quality Standards do not include numeric criteria for nitrogen. Instead, narrative criteria specify that waters "*shall be free from nutrients in concentrations that would cause or contribute to impairment of existing or designated uses and shall not exceed the site-specific criteria developed in a TMDL or as otherwise established by the Department pursuant to 314 CMR 4.00.*" 314 CMR 4.05(5)(c). Nitrogen is not listed as a cause of any of the designated use impairments in Stony Brook or the Merrimack River and, as such, the discharge of nitrogen compounds in the effluent will not cause or contribute to impairments downstream of the Facility. The aquatic life use in Stony Brook is, however, impaired for benthic macroinvertebrate bioassessment due to an unknown source.

Total nitrogen is the sum of total kjeldahl nitrogen (TKN) (ammonium, organic and reduced nitrogen) and nitrate-nitrite. It is derived by individually monitoring for organic nitrogen compounds, ammonia, nitrate, and nitrite and adding the components together. Common explosives used at the Facility contain nitrogen compounds, especially ammonium nitrate, which can mix with quarry water prior to discharge. *See* Safety Data Sheet attached to November 16, 2018, email from John MacLellan to EPA and MassDEP. Therefore, the Draft Permit proposes establishing monthly monitoring for total nitrogen when discharging. This monitoring will lead to the generation of data to assess whether discharges of nitrogen-based blasting chemicals cause or contribute to water quality issues related to nitrogen in the receiving waters.

5.1.6 Ammonia

Ammonia (NH_3) is the unionized form of ammonia nitrogen. Elevated levels of ammonia can be toxic to aquatic life. Temperature and pH affect the toxicity of ammonia to aquatic life. The toxicity of ammonia increases as temperature increases and ammonia concentration and toxicity increase as pH increases. Ammonia can affect fish growth, gill condition, organ weights and red blood cells, and can result in excessive plant and algal growth, which can cause eutrophication. Ammonia can also affect dissolved oxygen through nitrification, in which

oxygen is consumed as ammonia is oxidized. Low oxygen levels can then, in turn, increase ammonia by inhibiting nitrification. Total ammonia-nitrogen concentrations in surface waters tends to be lower during summer than during winter due to uptake by plants and decreased ammonia solubility at higher temperatures.

The applicable ammonia water quality criteria for the protection of aquatic life are numeric concentrations of pollutants that are pH and temperature dependent and can be derived using EPA's final *Aquatic Life Ambient Water Quality Criteria for Ammonia – Freshwater,* 2013 (EPA 822-R-18-022), which are included by reference in the Massachusetts WQS. *See* 314 CMR 4.06(6)(d): *Table 29a* (Generally Applicable Aquatic Life Criteria).

Given that 1) ammonium nitrate and possibly ammonium perchlorate containing compounds are used to blast the rock at the site, 2) ammonia is seen in the discharge from other regional quarries, and 3) ammonia can be directly toxic to aquatic organisms, the Draft Permit proposes quarterly monitor-only requirement for ammonia nitrogen. This monitoring will lead to the generation of data to assess whether discharges of blasting chemicals cause or contribute to water quality issues related to ammonia in the receiving waters. Ammonia nitrogen is also required annually as a component of whole effluent toxicity (WET) testing (*see* Section 5.1.9 of this Fact Sheet). The annual WET testing for ammonia nitrogen can substitute for one of the quarterly ammonia nitrogen tests.

5.1.7 Perchlorate

Perchlorate is both a naturally occurring and man-made chemical that is commonly used as an oxidizer in propellants, munitions, fireworks, flares, and explosives. Perchlorate can be found as a byproduct in nitrate salts used to produce, among other things, explosives. Manufactured forms of perchlorate include salts such as ammonium perchlorate. Perchlorate is highly soluble in water and relatively stable and mobile in surface water and groundwater systems. Perchlorate may be found as a co-contaminant in water with nitrate because ammonium nitrate is a main component in explosives. Perchlorate may also be present in nitrogen-based explosives as an impurity or detonators may contain up to 4 to 60 milligrams of potassium perchlorate.[13]

The Facility indicated to EPA that nitrogen-based explosive agents are used at the Facility. Therefore, the Draft Permit proposes a monthly monitor-only requirement for perchlorate in conjunction with total nitrogen monitoring.

[13] Dyno Nobel Asia Pacific Pty Limited, NONEL Non-electric Detonators Safety Data Sheet, p. 3, August 4, 2016. Currently found at: https://www.dynonobel.com/apac/~/media/Files/Dyno/ResourceHub/Technical%20Information/Asia%20Pacific/Initiation%20Systems/LPWFO%20-%20NONEL%20DETONATORS.pdf

5.1.8 Oil and Grease

Oil and Grease is not a single chemical constituent, but includes a large range of organic compounds, which can be both petroleum-related (e.g., hydrocarbons) and non-petroleum (e.g., vegetable and animal oils and greases, fats, and waxes). These compounds have varying physical, chemical, and toxicological properties. Generally, oils and greases in surface waters either float on the surface, are solubilized or emulsified in the water column, adsorb onto floating or suspended solids and debris, or settle on the bottom or banks. Oil and grease, or certain compounds within an oil and grease mixture, can be lethal to fish, benthic organisms, and water-dwelling wildlife. State WQSs for Inland Waters, Class B at 314 CMR 4.05(3)(b)7, state that "[*t]hese waters shall be free from oil, grease and petrochemicals that produce a visible film on the surface of the water, impart an oily taste to the water or an oily or other undesirable taste to the edible portions of aquatic life, coat the banks or bottom of the water course, or are deleterious or become toxic to aquatic life.*" A concentration of 15 mg/L is recognized as the level at which many oils produce a visible sheen and/or cause an undesirable taste in fish.[14]

Oil and grease testing is not currently required by the 2010 Permit. Therefore, there is no data available to determine if reasonable potential exists to cause or contribute to an excursion of the narrative water quality criterion. However, fuel, hydraulic and/or equipment lubricating oils that are used on site may result in the discharge to the receiving stream. Furthermore, a fuel oil/mineral oil blend is a component of the blasting compound used in the quarry. Therefore, the Draft Permit includes the requirement to monitor for oil and grease quarterly when discharging. The inclusion of oil and grease requirements in the Final Permit will lead to the generation of data to assess whether the Facility discharges oil and grease into the receiving water in amounts that would affect aquatic life or human health.

5.1.9 Bacteria

As described above, the *downstream* receiving water is listed as impaired for one or more designated uses and *Escherichia coli* (E. coli) is listed as a pollutant requiring a TMDL. Parts 2.2.2 of EPA's 2021 MSGP requires facilities to monitor discharges of stormwater associated with industrial activity to impaired waters without an EPA-approved or established TMDL. EPA does not currently have information regarding presence of *E. coli* in discharges from the quarry. However, the impaired water is 1.4 miles downstream of the Facility, *E. coli* is not expected to be present in the discharge, and if detected in the discharge its presence would likely be caused solely by natural background sources (e.g., birds). Therefore, EPA is not proposing *E. coli* monitoring in the Draft Permit at this time, but sampling is required with the next application for permit reissuance. *See* Draft Permit, Part I.C.2.

[14] USEPA. 1976. The Red Book – Quality Criteria for Water. July 1976.

5.1.10 Whole Effluent Toxicity

CWA §§ 402(a)(2) and 308(a) provide EPA and States with the authority to require toxicity testing. Section 308 specifically describes biological monitoring methods as techniques that may be used to carry out objectives of the CWA. Whole effluent toxicity (WET) testing is conducted to ensure that the additivity, antagonism, synergism, and persistence of the pollutants in the discharge do not cause toxicity, even when the individual pollutants are present at low concentrations in the effluent. The inclusion of WET requirements in the Final Permit will lead to the generation of data to assess whether the Facility discharges combinations of pollutants into the receiving water in amounts that would be toxic to aquatic life or human health.

In addition, under CWA § 301(b)(1)(C), discharges are subject to effluent limitations based on WQSs. Under CWA §§ 301, 303 and 402, EPA and the States may establish toxicity-based limitations to implement narrative water quality criteria calling for "no toxics in toxic amounts." *See also* 40 CFR § 122.44(d)(1). The Massachusetts WQSs at 314 CMR 4.05(5)(e) state, "All surface waters shall be free from pollutants in concentrations or combinations that are toxic to humans, aquatic life or wildlife." In addition, the Massachusetts WQSs at 314 CMR 4.03(2)(a) require no lethality to organisms passing through a mixing zone. MassDEP's Implementation Policy for the Control of Toxic Pollutants in Surface Waters includes whole effluent testing requirements as part of its interpretation of the State narrative criteria.[15] Under MassDEP's Implementation Policy, "[a]t dilution factors less than 10, effluent toxicity poses a high risk to receiving waters." EPA generally considers WET testing in addition to chemical specific criteria when evaluating whether discharges from a facility meet WQSs.

The regulations at 40 CFR §122.44(d)(1)(ii) state that, "[w]hen determining whether a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above a narrative or numeric criteria within a State water quality standard, the permitting authority shall use procedures which account for existing controls on point and non-point sources of pollution...[including] the sensitivity of the species to toxicity testing..." The regulations at 40 CFR § 122.44(d)(1)(v) further require whole effluent toxicity limits in a permit when a discharge has a "reasonable potential" to cause or contribute pollutants in concentrations or combinations that are toxic to humans, aquatic life, or wildlife.

No WET testing is currently required by the 2010 Permit. Therefore, there is no data available to determine if reasonable potential exists to cause or contribute to an excursion of a numeric or narrative water quality criterion. However, in the absence of facility specific effluent monitoring data, a permitting authority may still assess reasonable potential by evaluating a

[15] *Massachusetts Water Quality Standards Implementation Policy for the Control of Toxic Pollutants in Surface Waters*. February 23, 1990.

variety of factors and information, including available dilution, type of industry, and type of receiving water.[16]

GSC discharges to Gilson Brook Pond, which overflows and continues as Gilson Brook, a tributary to Stony Brook. As discussed above, 1) no available dilution of the effluent in the receiving water; 2) the effluent may contain a variety of pollutants from blasting chemicals and/or additives at GSC: and 3) the effluent no longer receives treatment apart from possible settling in the quarry pond. As is for this case, when information is insufficient to determine whether there is a reasonable potential to contribute to an excursion above a numeric or narrative criterion for whole effluent toxicity, EPA's Technical Support Document for Water Quality-based Toxics Control recommends the collection of this information, either through an information request during permit development, or incorporated into permit conditions.[17]

Therefore, in accordance with EPA's national and regional policy and 40 CFR § 122.44(d), EPA has determined that WET testing is an appropriate requirement to include in the Draft Permit.[18] The inclusion of WET requirements in the Final Permit will lead to the generation of data to assess whether the Facility discharges pollutants into the receiving water in amounts that would affect aquatic life or human health.

In accordance with current EPA guidance and State policy, whole effluent chronic effects are regulated by limiting the highest measured continuous concentration of an effluent that causes no observed chronic effect on a representative standard test organism, known as the chronic No Observed Effect Concentration (C-NOEC). Whole effluent acute effects are regulated by limiting the concentration that is lethal to 50% of the test organisms, known as the LC_{50}. Considering the discharge from the Facility is seasonal and intermittent, the Draft Permit includes requirements to conduct annual acute WET tests only. Toxicity testing must be performed in accordance with the EPA Region 1 test procedures and protocols specified in Attachment A, Freshwater Acute Toxicity Test Procedure and Protocol (February 2011) of the Draft Permit. EPA will evaluate at least five years of test results during permit reissuance and determine if LC_{50} limits are warranted in the next permit.

5.2 Special Conditions

[16] EPA's Technical Support Document for Water Quality based Toxics Control, EPA/505/2 90 001 (March 1991), page 50.

[17] *See* Chapter 3 of EPA/505/2-90-001. See also Section 308(a), 33 U.S.C. §1318(a), which authorizes EPA to require the owner or operator of any point source to provide information as may reasonably be required to carry out the objectives of the Clean Water Act.

[18] *Id.* at 51 "If the regulatory authority, after evaluating all available information on the effluent, in the absence of effluent monitoring data, is not able to decide whether the discharge causes, has the reasonable potential to cause, or contributes to, an excursion above a numeric or narrative criterion for whole effluent toxicity or for individual toxicants, the authority should require whole effluent toxicity or chemical-specific testing to gather further evidence."

5.2.1 Discharges of Chemicals and Additives

Chemicals and additives include, but are not limited to algaecides/biocides, antifoams, coagulants, corrosion/scale inhibitors/coatings, disinfectants, flocculants, neutralizing agents, oxidants, oxygen scavengers, pH conditioners, and surfactants. The Draft Permit allows the discharge of only those chemicals and additives specifically disclosed by the Permittee to EPA. In this case, the Permittee disclosed that the following explosive agents are used on site:

- 1966 Emulsion Blend
- 1.5D Emulsion Explosives
- Electronic Detonators (1.4B)
- Cast Boosters

However, EPA recognizes that chemicals and additives in use at a Facility may change during the term of the permit. As a result, Part I.C.1 of the Draft Permit includes a provision that requires the Permittee to notify EPA in writing of the discharge a new chemical or additive; allows for EPA review of the change; and provides the factors for consideration of such changes. The Draft Permit specifies that for each chemical or additive, the Permittee must submit the following information, at a minimum, in writing to EPA:

- Product name, chemical formula, general description, and manufacturer of the chemical/additive;
- Purpose or use of the chemical/additive;
- Safety Data Sheet (SDS) and Chemical Abstracts Service (CAS) Registry number for each chemical/additive;
- The frequency (e.g., hourly, daily), magnitude (e.g., maximum application concentration), duration (e.g., hours, days), and method of application for the chemical/additive and
- If available, the vendor's reported aquatic toxicity (i.e., NOAEL and/or LC_{50} in percent for aquatic organism(s)).

The Permittee must also provide an explanation that demonstrates that the discharge of such chemical or additive: 1) will not add any pollutants in concentrations that exceed any permit effluent limitation; and 2) will not add any pollutants that would justify the application of permit conditions different from, or in addition to those currently in this permit.

Assuming these requirements are met, discharges of a new chemical or additive is authorized under the permit upon notification to EPA unless otherwise notified by EPA.

5.2.2 Additional Monitoring Requirements for Next Permit Application

As previously discussed in Section 5.1.9 above, EPA is not proposing *E. coli* monitoring at this time. However, Part I.C.2 of the Draft Permit requires that GSC monitor the quarry discharge and report fecal coliform and *E. coli* with the next application submitted for permit reissuance.

5.2.3 Requirement to Submit SPCC Plan and Updated SWPPP

As previously discussed in Section 3.1 above, EPA found that GSC's SWPPP was outdated and has required that an updated SWPPP, as well as a copy of the Facility's Spill Prevention, Control, and Countermeasure (SPCC) Plan be submitted to EPA within three months of the effective date of the renewed permit. *See* Part I.C.3 of the Draft Permit.

5.3 Potential Alternative Permit Conditions

Part I.A of the 2010 Permit includes narrative water quality-based requirements to protect designated uses in accordance with state water quality standards. In the development of this permit, EPA Region 1 (the "Region") considered a variety of alternative permit conditions and monitoring requirements in lieu of the narrative requirements, as described in greater detail below. To ensure compliance with these applicable state narrative water quality standards, the State has indicated that it will include the narrative requirements in its draft water quality certification. Specifically, the State has notified EPA that it will propose the following narrative water quality-based requirements as state certification conditions in accordance with § 401(a) of the CWA and 40 CFR § 124.53:

- The discharge shall be free from pollutants in concentrations or combinations that settle to form objectionable deposits; float as debris, scum or other matter to form nuisances; produce objectionable odor, color, taste or turbidity; or produce undesirable or nuisance species of aquatic life.
- The discharge shall be free from pollutants in concentrations or combinations that adversely affect the physical or chemical nature of the bottom, interfere with the propagation of fish or shellfish, or adversely affect populations of non-mobile or sessile benthic organisms.
- The discharge shall be free from floating, suspended and settleable solids in concentrations and combinations that would impair any use assigned to the receiving water, that would cause aesthetically objectionable conditions, or that would impair the benthic biota or degrade the chemical composition of the bottom.
- The discharge shall be free from color and turbidity in concentrations or combinations that are aesthetically objectionable or would impair any use assigned to the receiving water.
- The discharge shall be free from oil, grease and petrochemicals that produce a visible film on the surface of the receiving water, impart an oily taste to the edible portions of

aquatic life, coat the banks or bottom of the water course, or are deleterious or become toxic to aquatic life.

- The discharge shall be free from taste and odor in such concentrations or combinations that are aesthetically objectionable, that would impair any use assigned to the receiving water, or that would cause tainting or undesirable flavors in the edible portions of aquatic life.
- The discharge shall be free from pollutants in concentrations or combinations that are toxic to humans, aquatic life or wildlife.

Based on the State's intent to include these requirements in the state certification, EPA does not find it necessary to include the alternative permit conditions and monitoring requirements in the Draft Permit. However, if some or all of these narrative conditions are not included in the final state certification, EPA will include the applicable alternative permit conditions and monitoring requirements in the Final Permit. Therefore, EPA has described these alternative permit conditions and monitoring requirements in detail below and is soliciting public comments on the inclusion of these if the state certification does not include the applicable narrative conditions.

The alternative permit conditions and monitoring requirements described below relate to reasonable potential analyses, WET testing, visual inspections of the receiving water, and benthic surveys. Each of these are related to compliance with specific narrative state water quality standards. It should also be noted that if any of these alternative requirements and monitoring requirements were to be included in this permit reissuance, EPA may remove or reduce these in the future and/or implement an alternative permitting approach if EPA finds that these are no longer necessary to protect designated uses in accordance with state water quality standards.

To be clear, each of the items described in this section below are not included in the Draft Permit and EPA intends to include them in the Final Permit only if the corresponding narrative condition is not included in the State's final certification of this permit and pursuant to any changes based on public comments.

Reasonable Potential Analyses

Given that EPA guidance[19] directs that reasonable potential analyses should be based on critical conditions, EPA uses the pollutant concentrations based on all available information provided to EPA during the development of the permit. As discussed in more detail in the pollutant-specific sections above, this information includes data from the Permittee's most recent application, DMR data during the review period, and any other available information included in the administrative record.

[19] See 2010 NPDES Permit Writer's Manual, chapter 6 available at: https://www.epa.gov/sites/default/files/2015-09/documents/pwm_chapt_06.pdf

If the permitting authority, in this case EPA, determines that the discharge of a pollutant will cause, has the reasonable potential to cause, or contribute to an excursion above WQSs, the permit must contain WQBELs for that pollutant. *See* 40 CFR § 122.44(d)(1)(i).

If the permitting authority, determines that the discharge of a pollutant will not cause, have the reasonable potential to cause, or contribute to an excursion above WQSs, the permit does not need to contain WQBELs for that pollutant. However, the permitting authority must ensure that the discharge of that pollutant does not increase during the permit term to the point that would violate water quality standards. Therefore, Part I.B.1 (Unauthorized Discharges) of the permit may include the following provision to ensure that EPA's reasonable potential analyses (for all pollutants) remain protective throughout the life of the permit, and which would also clearly articulate the scope of the protections afforded to the Permittee pursuant to CWA section 402(k):

> "For any pollutant without an effluent limitation in this permit, any pollutant loading greater than the proposed discharge (the "proposed discharge" is based on the chemical-specific data and the facility's design flow as described in the permit application, or any other information provided to EPA during the permitting process) is not authorized by this permit."

EPA notes that such increases may be allowable, but the Permittee must first submit a request to EPA to authorize such an increase. This request will allow EPA to conduct an updated reasonable potential analysis to reassess whether a WQBEL is needed for the newly proposed discharge. Permit modification or reissuance may be required before the proposed discharge would be authorized.

Toxicity

The Massachusetts WQSs at 314 CMR 4.05(5)(e) state, "All surface waters shall be free from pollutants in concentrations or combinations that are toxic to humans, aquatic life or wildlife." To ensure the receiving water is free from pollutants in concentrations or combinations that are toxic to humans, aquatic life or wildlife, throughout the permit term, EPA will incorporate additional circumstance-dependent WET requirements described below.

Under the following circumstances, the Permittee would be required to conduct at least two accelerated re-tests at 14-day intervals, which must be started within 14 days and 28 days of receiving the results:

- If any WET test results are in violation of any WET limit and the test acceptability criteria were met, re-test for the species that failed; or
- If the Permittee identifies or is provided notice of a sudden and significant death of large numbers of fish and/or shellfish in the vicinity of the discharge, test for all species

identified in permit.

If the receiving water was used as the dilution water and is suspected to be toxic (*e.g.*, based on results from the initial test), the Permittee would be required to conduct the accelerated WET tests using laboratory water as the dilution water with a similar pH and hardness as the receiving water. If the WET tests using laboratory water do not violate any WET limits, the Permittee would return to a normal monitoring frequency but would be required to request continued use of laboratory water as the dilution water based on these results. If either accelerated WET test violates any WET limits (and the test acceptability criteria were met), the discharge would be considered to have persistent toxicity and the Permittee would be required to immediately initiate a Toxicity Identification Evaluation and Toxicity Reduction Evaluation (TIE/TRE) as described below to resolve any toxic impacts on the receiving water.

The specific proposed TIE/TRE requirements are presented below and were developed based on guidance available in EPA's *2024 NPDES WET Permit Writers' Manual*[20]. EPA notes that the results of the TIE/TRE might also lead to additional, future NPDES permit controls, such as additional WET permit limits, chemical-specific permit limits, or a compliance requirement to reduce or eliminate toxicity.

(1) If the WET re-test described above results in a violation of the WET limits, the Permittee must immediately initiate a TIE/TRE designed to identify and reduce toxicity in the discharge. Notice of TIE/TRE study implementation is to be submitted to EPA (via email: R1NPDESReporting@epa.gov) and the State within 10 days of receiving notification of WET re-test failure.

(2) A TIE/TRE schedule and action plan must be submitted to EPA and the State as an electronic attachment to the DMR within 60 days of receipt of WET re-test failure.

The TIE/TRE schedule (from the initiation date to the termination date) must be as short as possible, and no longer than 24 months. The "TIE/TRE initiation date" is the date of the receipt of results for the toxicity test that confirms persistent toxicity and the "TIE/TRE termination date" is the date corrective actions to resolve toxicity are identified and a schedule for completing these corrective actions is proposed.

The objective of the action plan is to identify the source(s) of toxicity by analyzing toxicity testing samples for any toxicant identified as being a potential source of toxicity and ascertaining whether the same level of toxicity occurs when any suspected toxicant level varies. This information might lead to finding one or more toxicants or confirming or eliminating suspected toxicants and

[20] Available at: https://www.epa.gov/system/files/documents/2024-06/npdes-wet-permit-writers-manual.pdf

possibly their source(s).

(3) Quarterly "TIE/TRE Progress Reports" shall be submitted to EPA and the State as an electronic attachment to the DMR at the end of each quarter after the TIE/TRE initiation date. The progress report must list all activities and findings related to resolving toxicity, including all WET and chemical test data. The data summaries of the TIE/TRE must also be provided in a tabulated format with explanations of the procedures used and the recorded findings from the study.

(4) A "Final TIE/TRE Report" shall be submitted to EPA and the State within 45 days of the TIE/TRE termination date (as an electronic attachment to the DMR) and should summarize the TIE/TRE activities and findings, propose the corrective action(s) to be taken, and propose a schedule to complete any identified corrective action(s).

(5) After submission of the "Final TIE/TRE Report," the Permittee shall continue to submit quarterly "Toxicity Reduction Progress Reports" (as an electronic attachment to the DMR) documenting progress on the corrective actions being taken to reduce toxicity in accordance with the proposed schedule.

(6) Upon completion of all corrective actions identified in the "Final TIE/TRE Report," the Permittee shall submit a "Toxicity Reduction Completion Report" (as an electronic attachment to the DMR) summarizing the corrective actions taken based on the TIE/TRE and shall include all information necessary to demonstrate that the discharge is no longer toxic and consistently complies with all WET limits.

Visual Inspection of the Receiving Water

Massachusetts Surface Water Quality Standards include several narrative requirements related to aesthetics, solids and oil & grease, as follows:

(314 CMR 4.05(5)(a)) **Aesthetics**. All surface waters shall be free from pollutants in concentrations or combinations that settle to form objectionable deposits; float as debris, scum or other matter to form nuisances; produce objectionable odor, color, taste or turbidity; or produce undesirable or nuisance species of aquatic life.

(314 CMR 4.05(3)(a)5.; (3)(b)5.; (3)(c)5.; (4)(a)5.; (4)(b)5.; and (4)(c)5.) **Solids**. These waters shall be free from floating, suspended and settleable solids in concentrations or combinations that would impair any use assigned to this class, that would cause aesthetically objectionable conditions, or that would impair the benthic biota or degrade the chemical composition of the bottom.

(314 CMR 4.05(3)(b)7. and (4)(b)7.) **Oil and Grease**. These waters shall be free from oil, grease and petrochemicals that produce a visible film on the surface of the water, impart an oily taste to the water or an oily or other undesirable taste to the edible portions of aquatic life, coat the banks or bottom of the water course, or are deleterious or become toxic to aquatic life.

To ensure compliance with these narrative water quality standards, Table A.1 of the permit would include a reporting requirement for "Aesthetics," and a footnote which more specifically requires the following monitoring requirements:

Once per quarter, while discharging, the Permittee shall conduct a visual inspection of the receiving water in the vicinity of the outfall and report any changes that may be caused by the discharge as follows:

1) any observable change in odor;
2) any visible change in color;
3) any visible change in turbidity;
4) the presence or absence of any visible floating materials, scum or foam;
5) the presence or absence of any visible settleable solids; or
6) the presence or absence of any visible film or sheen on the surface of the water or coating the banks of the water course.

Although there is no objective means to measure the impact of the discharge on the taste of the receiving water, the Permittee shall report to EPA and MassDEP any complaints it receives from the public regarding taste and/or odor and document what remedial actions, if any, it took to address such complaints.

The results do not need to be submitted each quarter. Rather, a summary of the four quarterly visual inspections as well as any complaints received from the public regarding the taste of the receiving water shall be submitted as an electronic attachment to the December DMR, which is due each January 15th for the previous calendar year.

If an oily sheen is observed on the surface of the water in the vicinity of the outfall during the monthly visual inspection, the Permittee shall follow the procedures described above related to accelerated WET testing and potentially (if the accelerated tests demonstrate toxicity) conduct a TIE/TRE.

The Massachusetts "aesthetics" narrative water quality standard also seeks to protect against any discharge that, "produce[s] undesirable or nuisance species of aquatic life." Because the production of undesirable or nuisance species of aquatic life is most commonly caused by the discharge of excess nutrients, the nitrogen monitoring required in the Draft Permit, as described in Section 5.1.5 of this Fact Sheet, would address this portion of the standard.

The "solids" narrative water quality standard also requires that waters shall be "free from floating, suspended and settleable solids…that would impair the benthic biota or degrade the chemical composition of the bottom." A Benthic Survey requirement, as discussed below, would address this portion of the standard particularly with respect to settleable solids. In addition, total suspended solid (TSS) requirements in the Draft Permit are proposed based on BPJ as described in Section 5.1.3 of this Fact Sheet.

The "oil & grease" narrative water quality standard also prohibits the receiving water from being deleterious or toxic to aquatic life. This portion of the standard is addressed in the Toxicity section above. The oil and grease monitoring requirement in the Draft Permit is described in Section 5.1.8 of this Fact Sheet.

Benthic Survey

Massachusetts Surface Water Quality Standards address bottom pollutants at 314 CMR 4.05(5)(b), which requires that "[a]ll surface waters shall be free from pollutants in concentrations or combinations or from alterations that adversely affect the physical or chemical nature of the bottom, interfere with the propagation of fish or shellfish, or adversely affect populations of non-mobile or sessile benthic organisms."

To ensure compliance with these standards, the permit would require that the Permittee conduct a benthic survey to assess impacts from the discharge to aquatic life in the benthic environment. The permit would include a requirement of one such survey this permit term during the third calendar quarter (*i.e.*, July through September) that begins at least 12 months from the effective date of the permit. The third calendar quarter represents the season of relatively low flow when the discharge has less dilution and is, therefore, more likely to impact the benthic population. The initial 12 months of the permit term allows the Permittee sufficient time to plan for this survey after permit issuance while ensuring results are available relatively soon in case further action is needed to protect the benthic population. The results of the benthic survey will assist EPA in the development of any future permit conditions needed to ensure compliance with 314 CMR 4.05(5)(b).

The specific proposed requirements will include:

> Benthic grab samples shall be taken at three locations sited along each of two transects (one immediately upstream/upgradient of the discharge at a location considered to be unimpacted by the discharge, and one downstream/downgradient of the discharge immediately outside of the estimated zone of initial dilution). Along each transect, duplicate samples shall be taken in the thalweg along with sites near each shoreline, for a total of six samples along each transect and 12 samples total. Organisms shall be sorted and identified to the lowest possible taxonomic level. Counts shall be standardized to densities per square meter of bottom. To characterize the bottom, grain size samples shall be collected at each grab site.

Taxonomy must be performed by a professional freshwater macroinvertebrate taxonomist who, at a minimum, holds and maintains for the duration of the contract a certification from the Society of Freshwater Science for eastern genera in group 1 (Crustacea and Arthropods other than EPT and Chironomidae), group 2 (Ephemeroptera, Plecoptera, and Trichoptera nymphs and larvae only) and group 3 (Chironomidae larvae only).

A report summarizing the results and comparing the upstream and downstream benthic populations shall be submitted by the following January 15 as an electronic attachment to the DMR.

6.0 Federal Permitting Requirements

6.1 Endangered Species Act

Section 7(a) of the Endangered Species Act of 1973, as amended (ESA), grants authority to and imposes requirements on Federal agencies regarding species of fish, wildlife, or plants that have been federally listed as endangered or threatened (listed species) and regarding habitat of such species that has been designated as critical (critical habitat).

Section 7(a)(2) of the ESA requires every federal agency, in consultation with and with the assistance of the Secretary of Interior and the Secretary of Commerce, to ensure that any action it authorizes, funds or carries out, in the United States or upon the high seas, is not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of critical habitat. The United States Fish and Wildlife Service (USFWS) administers Section 7 consultations for federally protected bird, terrestrial and freshwater species, while the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries) administers Section 7 consultations for listed species of marine organisms (including marine mammals and reptiles), as well as for anadromous fish species.

The federal action being considered in this case is EPA's proposed reissuance of an NPDES permit for Granite State Concrete (GSC). The Draft Permit is intended to replace the 2010 Permit in authorizing discharges from the Facility. Specifically, the Draft Permit proposes to regulate the discharge from Outfall 001, located at approximately Latitude 42.630953, Longitude -71.418538, a few yards downstream of the quarry discharge pipe, just prior to entering a culvert on the northern hillside of Gilson Brook Pond, prior to discharging into Gilson Brook Pond, in Westford, Massachusetts. As the federal agency charged with authorizing the Facility's pollutant discharges, EPA assesses potential impacts to federally listed species and critical habitat and initiates consultation to the extent required, under Section 7(a)(2) of the ESA.

EPA has reviewed the federal endangered or threatened species of fish, wildlife, and plants in the expected action area of the outfalls to determine if EPA's proposed NPDES permit could potentially impact any such listed species in this reach of Gilson Brook Pond and Gilson Brook, in Westford, Massachusetts. Regarding protected species under the jurisdiction of USFWS, two species may be present in the action area of the Facility's discharge,[21] the endangered northern long-eared bat (*Myotis septentrionalis*) and the proposed endangered tricolored bat (*Perimyotis subflavus)*.

According to the USFWS, the northern long-eared bat is found in, "winter – mines and caves, summer – wide variety of forested habitats." This species is not considered aquatic. However, because the Facility's projected action area in the Gilson Brook Pond and Gilson Brook reach of the water bodies in the town of Westford, Massachusetts overlaps with the general statewide range of the northern long-eared bat, EPA submitted an evaluation on potential effects of the project to the Information for Planning and Consultation (IPaC) system provided by the USFWS. The USFWS system confirmed by letter that, based on the specific project information submitted, the project would have "no effect" on the northern long-eared bat[22].

At this time, no such USFWS IPaC mechanism is in place to evaluate potential impacts to the proposed endangered tricolored bat. Because the habitat of the tricolored bat is generally similar to the NLE bat (overwintering - caves or mines; spring/summer/fall – deciduous live or dead hardwood trees), EPA has determined that the reissuance of this permit would also have "no effect" on the proposed endangered tricolored bat[23].

This concluded EPA's consultation responsibilities for the GSC NPDES permitting action under ESA section 7(a)(2) with respect to the northern long-eared bat and tricolored bat. No ESA section 7 consultation is required with USFWS for these species.

Regarding protected species under the jurisdiction of NOAA Fisheries, a number of anadromous and marine species and life stages are present in Massachusetts waters. However, the action area is located approximately 28 miles from the coast and overlaps a first order stream in the Merrimack River Watershed, far from anadromous species habitat. No protected species under the jurisdiction of NOAA Fisheries overlap with the GSC action area. Therefore, no consultation is required.

Although the proposed permit action is deemed to have no effect on listed species, EPA notified USFWS and NOAA Fisheries Protected Resources Division at the beginning of the public comment period that the Draft Permit and Fact Sheet were available for review and provided a link to the EPA NPDES Permit website to allow direct access to the documents.

[21] *See* https://ecos.fws.gov/ipac/
[22] USFWS IPaC Project code: 2023-0008202, June 13, 2023
[23] EPA Supplemental Basis Document – Tricolored Bat; May 14, 2024.

Initiation of consultation is required and shall be requested by EPA or by USFWS/NOAA Fisheries where discretionary federal involvement or control over the action has been retained or is authorized by law and if: 1) new information reveals that the action may affect listed species or critical habitat in a manner or to an extent not previously considered in the analysis; 2) the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the previous analysis; 3) a new species is listed or critical habitat designated that may be affected by the identified action; or 4) there is any incidental taking of a listed species that is not covered by an incidental take statement.

6.2 Essential Fish Habitat

Under the 1996 Amendments (PL 104-267) to the Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. §§ 1801, *et seq*., EPA is required to consult with NOAA Fisheries if proposed actions that EPA funds, permits, or undertakes, "may adversely impact any essential fish habitat." *See* 16 U.S.C. § 1855(b).

The Amendments broadly define "essential fish habitat" (EFH) as: "waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity". *See* 16 U.S.C. § 1802(10). "Adverse impact" means any impact that reduces the quality and/or quantity of EFH. 50 CFR § 600.910(a). Adverse effects may include direct (e.g., contamination or physical disruption), indirect (e.g., loss of prey, reduction in species' fecundity), site specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

Essential fish habitat is only designated for species for which federal fisheries management plans exist (16 U.S.C. § 1855(b)(1)(A)). EFH designations for New England were approved by the U.S. Department of Commerce on March 3, 1999. A New England Fishery Management Council's Omnibus Essential Fish Habitat Amendment in 2017 updated the descriptions. The information is included on the NOAA Fisheries website at: https://www.fisheries.noaa.gov/topic/habitat-conservation. In some cases, a narrative identifies rivers and other waterways that should be considered EFH due to present or historic use by federally managed species.

The Federal action being considered in this case is EPA's proposed NPDES permit for GSC. The Draft Permit is intended to replace the 2010 Permit in governing the Facility. Specifically, the Draft Permit proposes to regulate the discharge from Outfall 001, located at Latitude 42.630953, Longitude -71.418538, which enters Gilson Brook Pond at Latitude 42.630336, Longitude -71.419229, in Westford, Massachusetts. As the federal agency charged with authorizing the discharge from this Facility, EPA determines whether the discharge may adversely impact any essential fish habitat species and consults with NOAA Fisheries, when required under the Magnuson-Stevens Act.

EPA has assessed the potential for EFH species to be directly or indirectly adversely impacted by the discharge from the Facility into Gilson Brook. The only EFH species that may be influenced

by the discharge is the Atlantic salmon (*Salmo salar*). The juvenile and adult life stages of Atlantic salmon have been identified by NOAA Fisheries as occurring in the Merrimack River.

While Gilson Brook is a tributary of the Merrimack River, it is approximately four miles from the mainstem of the river. The Facility's quarry process water and stormwater discharges into a section of Gilson Brook that has been modified into a small, approximately sixteen-acre impoundment. The earthen dam that forms this impoundment is an obstruction to fish passage. From the location of the outfall, Gilson Brook travels approximately one mile and then empties into Stony Brook. From this confluence, Stony Brook travels another 1.5 miles downstream before becoming the Stony Brook Reservoir. The dam that forms this reservoir is also an obstruction to upstream and downstream fish passage. The brook on the downstream side of the dam, still know as Stony Brook, flows another 1.5 miles before joining the Merrimack River in Chelmsford, Massachusetts, at approximately River Mile 43. From this point in the Merrimack River, proceeding downstream, there are two additional obstructions to Atlantic salmon movement, namely the Pawtucket Falls and Dam in Lowell, Massachusetts and the Essex Dam in Lawrence, Massachusetts.

Although there is a sizable distance between the Facility discharge on Gilson Brook and the Merrimack River, as well as the number of fish passage obstructions noted on Stony Brook and the Merrimack River, EPA notes that Stony Brook and tributaries of the Merrimack are designated EFH for Atlantic salmon by NOAA Fisheries because of historic use by federally managed species. Therefore, EFH consultation is required.

6.2.1 EPA's Finding of all Potential Impacts to EFH Species

EPA has determined that the operation of this Facility, as governed by this permit action, may adversely affect the EFH of Atlantic salmon. The Draft Permit has been conditioned in the following way to minimize any impacts that reduce the quality and/or quantity of EFH:

- This Draft Permit action does not constitute a new source of pollutants because it is the reissuance of an existing NPDES permit;

- Discharge monitoring requirements have been proposed for pH, total suspended solids, turbidity, oil and grease, perchlorate, total nitrogen, and ammonia nitrogen, in order to meet technology-based or state water quality standards;

- The Draft Permit proposes new annual whole effluent toxicity (WET) testing to ensure that the discharge does not cause toxicity problems; Acute toxicity tests will be conducted annually to evaluate the lethality of the discharge;

- The Draft Permit prohibits the discharge of pollutants or combination of pollutants in toxic amounts;

• The effluent limitations and conditions in the Draft Permit were developed to be protective of all aquatic life;

• The Draft Permit prohibits violations of the state water quality standards; and

• The proposed Draft Permit requirements minimize any reduction in quality and/or quantity of EFH, either directly or indirectly.

EPA has determined that the conditions and limitations contained in the Draft Permit adequately protect all aquatic life, as well as the essential fish habitat for Atlantic salmon in the Merrimack River watershed. Further mitigation is not warranted. Should adverse impacts to EFH be detected as a result of this permit action, or if new information is received that changes the basis for EPA's conclusions, NOAA Fisheries Habitat and Ecosystem Services Division will be contacted and an EFH consultation will be re-initiated.

At the beginning of the public comment period, EPA notified NOAA Fisheries Habitat and Ecosystem Services Division that the Draft Permit and this Fact Sheet were available for review and provided a link to the EPA NPDES Permit website to allow direct access to the documents.

In addition to this Fact Sheet and the Draft Permit, information to support EPA's finding was included in a letter under separate cover that will be sent to the NOAA Fisheries Habitat and Ecosystem Services Division during the public comment period.

7.0 Public Comments, Hearing Requests, and Permit Appeals

All persons, including applicants, who believe any condition of the Draft Permit 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 permit writer, Sharon DeMeo at the following email address: demeo.sharon@epa.gov.

Prior to the close of the public comment period, any person may submit a written request to EPA for a public hearing to consider the Draft Permit. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public hearing may be held if the criteria stated in 40 CFR § 124.12 are satisfied. In reaching a final decision on the Draft Permit, EPA will respond to all significant comments in a Response to Comments document attached to the Final Permit and make these responses available to the public on EPA's website.

Following the close of the comment period, and after any public hearings, if such hearings are held, EPA will issue a Final Permit decision, forward a copy of the final decision to the applicant, and provide a copy or notice of availability of the final decision to each person who submitted written comments or requested notice. Within 30 days after EPA serves notice of the issuance of the Final Permit decision, an appeal of the federal NPDES permit may be commenced by

filing a petition for review of the permit with the Clerk of EPA's Environmental Appeals Board in accordance with the procedures at 40 CFR § 124.19.

If for any reason, comments on the Draft Permit and/or a request for a public hearing cannot be emailed to the permit writer specified above, please contact them at telephone number: (617) 918-1995.

8.0 Administrative Record

The administrative record on which this Draft Permit is based may be accessed by contacting Sharon DeMeo at 617-918-1995 or via email to demeo.sharon@epa.gov.

January 2025

Ken Moraff, Director
Water Division
U.S. Environmental Protection Agency

Figure 1: Location Map of Granite State Concrete Company

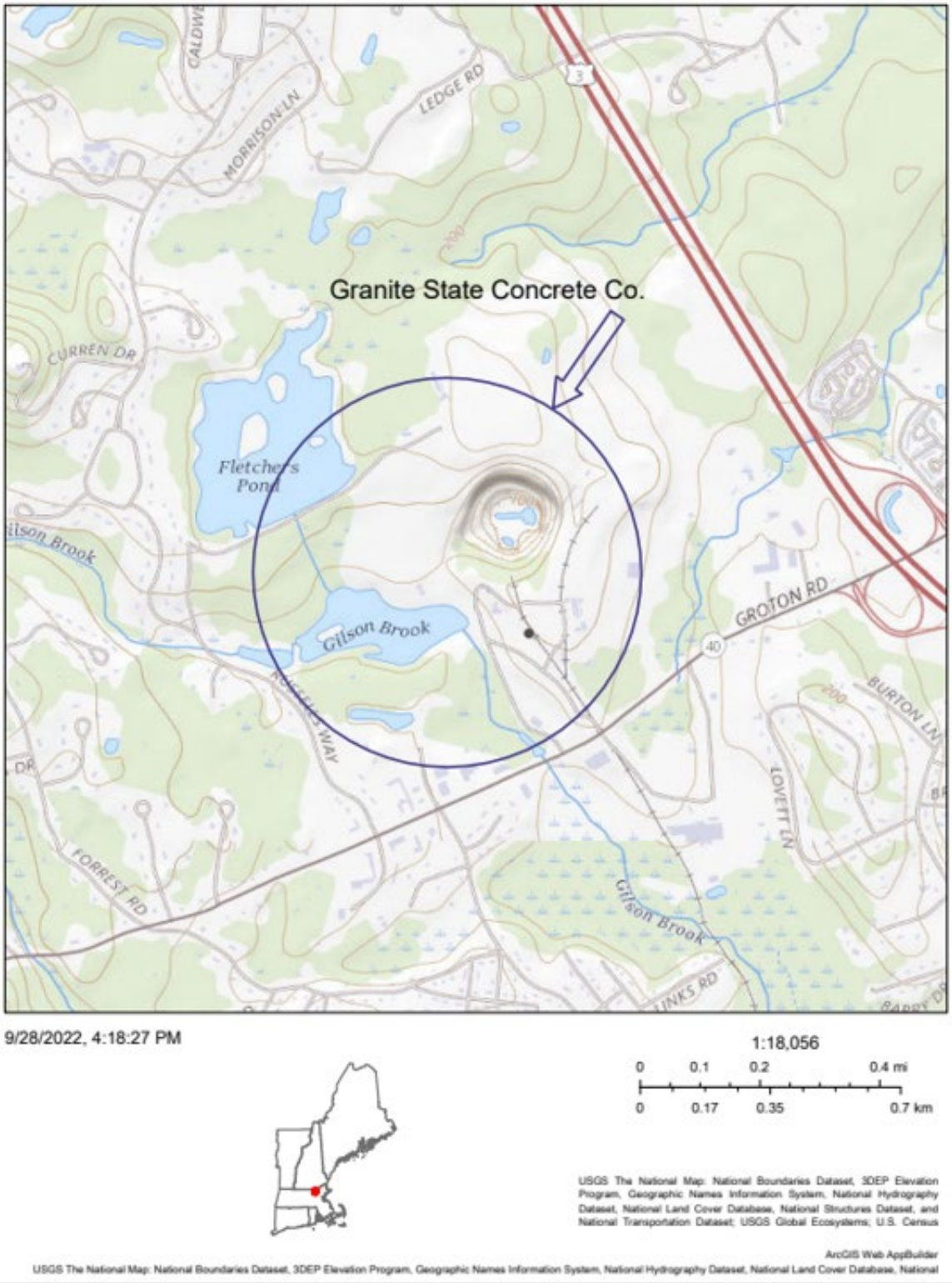
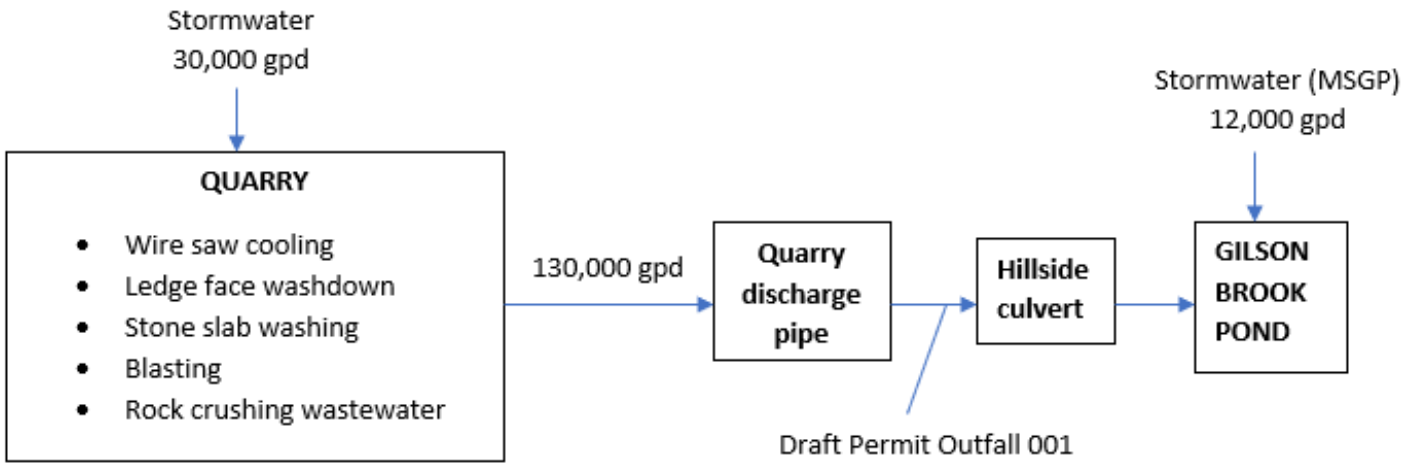


Figure 2: Site Plan

Source: EPA 2023

Figure 3: Schematic of Water Flow



Source: EPA 2023

Figure 4: Ponded Water Near Rock Crushing Operation on January 25, 2023

Source: EPA Photo 2023

Figure 5: June 12, 2023, Site Visit Photos of Drainage Path from Rock Crushing Area Pond

Source: EPA Photos 2023

Appendix A: Discharge Monitoring Data

Outfall Serial Number 001 – Overflow of Gilson Pond; Monthly Effluent Monitoring (0 = non-detect; NODI C = no discharge)

Parameter	Flow	Flow	TSS	TSS	pH	pH	Turbidity	Turbidity
	Monthly Avg	Daily Max	Monthly Avg	Daily Max	Minimum	Maximum	Monthly Avg	Daily Max
Units	**gal/d**	**gal/d**	**mg/L**	**mg/L**	**SU**	**SU**	**NTU**	**NTU**
Effluent Limit	**Report**	**Report**	**20**	**40**	**6.5**	**8.3**	**25**	**50**
Minimum	**270000**	**600000**	**0**	**0**	**6.5**	**6.6**	**0.63**	**0.7**
Maximum	**900000**	**1200000**	**5.37**	**11**	**8.3**	**8.3**	**7.75**	**11**
Median	**Non-Detect**	**Non-Detect**	**Non-Detect**	**Non-Detect**	**Non-Detect**	**Non-Detect**	**Non-Detect**	**Non-Detect**
No. of Violations	**N/A**	**N/A**	**0**	**0**	**0**	**0**	**0**	**0**
Monitoring Period End Date								
3/31/2019	700000	1000000	5.37	7.6	7	7	7.75	11
4/30/2019	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
5/31/2019	900000	1100000	0	0	7.2	7.3	1.96	2.1
6/30/2019	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
7/31/2019	600000	900000	0	0	7.4	7.4	2.16	2.4
8/31/2019	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
9/30/2019	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
10/31/2019	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
11/30/2019	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
12/31/2019	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
1/31/2020	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
2/29/2020	800000	1200000	0	0	6.5	6.6	3.93	4.9
3/31/2020	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
4/30/2020	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
5/31/2020	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
6/30/2020	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
7/31/2020	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
8/31/2020	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
9/30/2020	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
10/31/2020	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
11/30/2020	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
12/31/2020	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
1/31/2021	600000	900000	0	0	7.1	7.3	3	3
2/28/2021	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
3/31/2021	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
4/30/2021	600000	900000	0	0	7.2	7.2	0.63	0.7

5/31/2021	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
6/30/2021	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
7/31/2021	600000	900000	0	0	6.5	6.8	3.1	3.2
8/31/2021	500000	800000	0	0	7.2	7.3	1.46	2
9/30/2021	600000	810000	0	0	6.9	6.9	2.23	2.3
10/31/2021	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
11/30/2021	600000	810000	0	0	6.6	7.2	1.9	2
12/31/2021	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
1/31/2022	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
2/28/2022	600000	850000	1.5	6	6.6	6.7	3.27	4.5
3/31/2022	810000	850000	0	0	6.9	7	1.52	2.1
4/30/2022	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
5/31/2022	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
6/30/2022	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
7/31/2022	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
8/31/2022	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
9/30/2022	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
10/31/2022	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
11/30/2022	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
12/31/2022	270000	850000	0	0	7.2	7.3	1.87	2.7
1/31/2023	900000	900000	0	0	7.7	8.2	2.45	3.5
2/28/2023	600000	900000	0	0	6.5	6.7	0.85	1.2
3/31/2023	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
4/30/2023	300000	900000	0	0	7.46	7.65	1.22	1.7
5/31/2023	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
6/30/2023	600000	900000	0	0	6.92	7.12	0.785	1.1
7/31/2023	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
8/31/2023	600000	900000	0	0	6.64	6.72	1.67	2.9
9/30/2023	600000	900000	0	0	7.67	7.78	4.8	5.2
10/31/2023	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
11/30/2023	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
12/31/2023	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
1/31/2024	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
2/29/2024	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
3/31/2024	900000	900000	0	0	8.3	8.3	2.8	3
4/30/2024	600000	600000	4.3	11	7.36	7.42	7.36	7.42
5/31/2024	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
6/30/2024	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
7/31/2024	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
8/31/2024	900000	900000	0	0	7.34	7.4	2.8	2.9
9/30/2024	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C
10/31/2024	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C	NODI: C

Appendix B: Gilson Brook Pond WOTUS Determination

A. Introduction

EPA Region 1 is in the process of reissuing an NPDES permit (MA0020231) to Granite State Concrete Co., Inc., (GSC) of Westford, Massachusetts. The current (expired but administratively continued) permit authorizes GSC to discharge "quarry water," consisting of quarry process water, rock crushing process water, stormwater, and groundwater seepage that collect at the bottom of the quarry, to Gilson Brook after they enter an impoundment of the brook called Gilson Brook Pond. Under the current permit, the pond is identified as a waste treatment system pursuant to 40 CFR § 122.2 and hence a non-jurisdictional water; therefore, the effluent limits are set at the point where the pond overflows into the brook. This Appendix provides information that supports Region 1's conclusion that Gilson Brook Pond does not qualify as a waste treatment system and is a jurisdictional "water of the United States" (WOTUS) under the Clean Water Act.

The pond is located on a parcel of land at 534 Groton Road, Westford, Massachusetts that is currently owned by GSC. Prior to 2011, this site was owned and operated by Fletcher Granite, which still operates a facility south of the quarry at 535 Groton Road, where granite products are fabricated. Although GSC now owns and operates the quarry, most of the information presented in this Appendix is based on the review of records from when Fletcher Granite ("Company" or "Permittee") was the owner of the property.

EPA has issued several NPDES permits since 1974 to the Company and, more recently, to GSC. As described in more detail below, the initial permit authorized, and the Company discharged, wastewater and stormwater directly to Gilson Brook downstream of the pond. Under the more recent permits, however, the discharges enter the pond first, and the permit limits apply at the point where the pond overflows to the brook. In these more recent permits, the pond is either implicitly or explicitly considered to be a waste treatment system and not a water of the U.S.

After a detailed review of the history of this facility and the permits issued over time, the Region believes that the recent permits incorrectly characterized Gilson Brook Pond as falling within the waste treatment exclusion from the definition of "waters of the United States" set forth in 40 CFR § 122.2. For the reasons discussed below, the Region has determined that Gilson Brook Pond, which was originally constructed by impounding a water of the U.S. for the sole purpose of obtaining cooling water, was and remains a water of the U.S., and that the NPDES permit limits should apply at the point where the discharges enter Gilson Brook Pond.

B. Background and Chronology

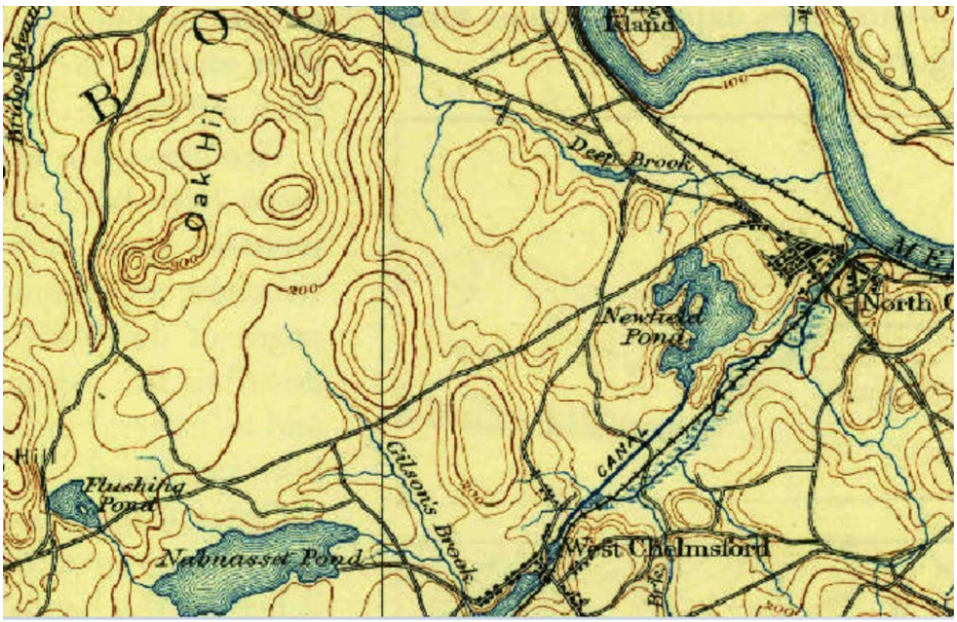
1. Gilson Brook Pond

Gilson Brook Pond is roughly a 30-acre impoundment of Gilson Brook and was created in 1936, according to comments the Company submitted regarding the 2001 draft permit. EPA found evidence, in the form of USGS maps (Figure B1), that the pond was created during that general time frame. A

plant layout diagram drawn in 1954[1] (Figure B2) shows that Gilson Brook Pond was then referred to as "Old Pond" and a second impounded pond, created between 1941-1954, which can be seen in the 1987 map below, was considered "New Pond."[2]

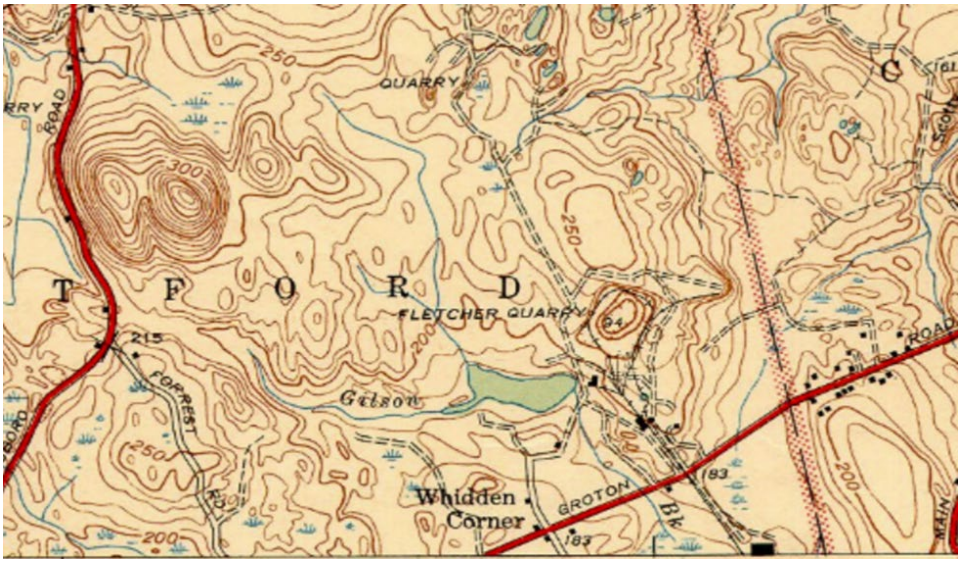
Gilson Brook originates in headwaters approximately one-half mile west of the impoundment, and it flows from the Pond for approximately 1.5 miles into Stony Brook, which is a tributary of the Merrimack River. Gilson Brook is a Class B water under Massachusetts water quality standards pursuant to 314 C.M.R. 4.06(4), which assigns Class B to any inland water that is not specifically designated. Stony Brook is specifically designated as a Class B warm water fishery. 314 C.M.R. 4.06, Table 20. Stony Brook is currently impaired for aquatic macroinvertebrate bioassessments and *Escherichia coli*. *See Massachusetts Integrated List of Waters for the Clean Water Act 2018/2020 Reporting Cycle*, MassDEP Division of Watershed Management Watershed Planning Program, Worcester, Massachusetts; November 2021; CN: 505.1. Available at: https://www.mass.gov/doc/final-massachusetts-integrated-list-of-waters-for-the-clean-water-act-20182020-reporting-cycle/download

Figure B1 – USGS Maps of Gilson Brook Headwaters Through Time

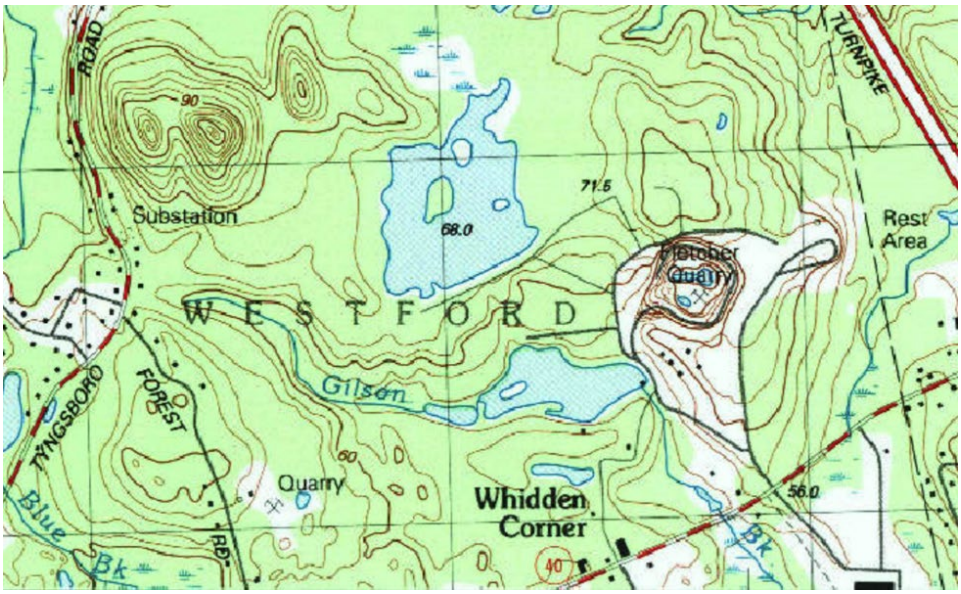


1935 Map of Gilson Brook Headwaters

[1] 1954 is an approximate date because the "4" is not clearly legible.
[2] Further consideration is not given to New Pond, now commonly known as Fletcher Pond or Greystone Pond, because GSC does not discharge process or stormwater to this pond.



1941 Map of Gilson Brook Headwaters



1987 Map of Gilson Brook Headwaters

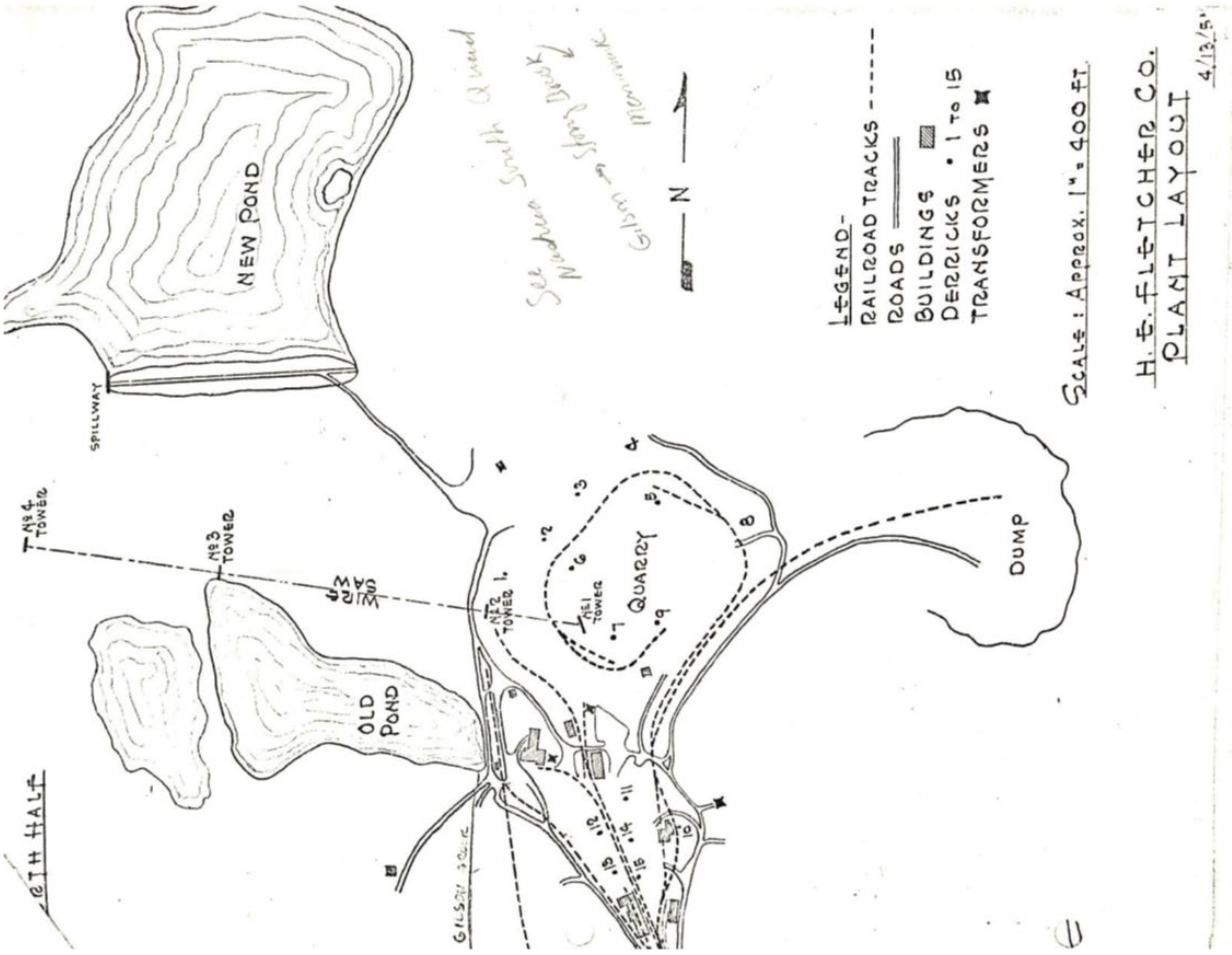
2. 1973 Robinson Field Memo

A memo dated May 4, 1973, provides an account of a site visit to Fletcher Granite by two Massachusetts Division of Water Pollution Control (MA DWPC) employees, including the author of the memo, Mr. Robinson, as well as the results from samples collected during the visit and the 1954 plant layout diagram (Figure B2). The visit was prompted by complaints made by Mr. Barretto, from a neighboring property, "that industrial waste discharges to Gilson Brook were severe."

Mr. Robinson explains that "water, used for cooling the saws, is obtained from either of two man-made ponds. This cooling water becomes contaminated with stone dust and with silicon carbide, an abrasive material on the saw…. Contaminated cooling water and any surface drainage or stormwaters

which collect within the quarry are pumped through an 8-inch pipe to a ditch which joins with Gilson Brook *below* the 'old' man-made pond." [emphasis added]. Robinson further describes, and the sampling data verify, that "[a]nalysis of the pond outlet reveals a high quality water, while analysis of Gilson Brook at Route 40 indicates that the Brook was contaminated with inert suspended solids." In addition, Robinson makes clear that "Gilson Brook, situated on property owned by the H. E. Fletcher Company, is therefore being used to settle the inert suspended solids." Finally, Robinson recommends that the Company be placed on a schedule to plan and construct a treatment system.

Figure B2 – Fletcher Granite Plant Layout Diagram



(Note: Figure B2 positioned with vertical axis pointing north, which corresponds with actual property layout).

3. First Permit Term

The first NPDES permit application, received April 17, 1973, identifies the receiving water as Gilson Brook. At the time, the combined process and stormwater discharges went directly to the brook below the pond, as described in the Robinson memo. EPA issued public notice of the first draft NPDES permit for Fletcher Granite on June 12, 1974. The Company commented that it would be evaluating options for "the reduction or elimination of process water discharge to Gilson Brook." The first final permit, issued July 22, 1974, established interim effluent limits and also required the Permittee to submit an engineering report and plans to achieve more stringent total suspended solids (TSS) and turbidity limits beginning July 1975, and to evaluate "the feasibility of complete recycling of the process water and elimination of the discharge wholly or in part."

Discharge Monitoring Report Data

After the first permit was issued, EPA began to receive quarterly discharge monitoring reports. Results of weekly sampling for the first year showed a wide range of TSS levels but the majority were exceedingly high (>1000 mg/L, including values > 3000, 4000, 6000 and 7000 mg/L). Similarly, turbidity levels were high, with most >100 NTUs and up to 875 NTUs, including one analysis that resulted in the reporting of "off scale." During the first year after permit issuance, there is evidence that the neighbor, Mr. Barretto, had continued to inquire about the water quality of Gilson Brook. In one of the response letters from the MA DWPC, Mr. Barretto was told that the State "cannot explain the worsening of the turbidity of the water other than, as suggested by Mr. Smith [Fletcher Plant Engineer] in his monitoring report, it could have been due to unusually dry weather conditions such that the saw cooling water was not diluted with precipitation."

Correspondence from Fletcher Granite

On October 11, 1974, Fletcher Granite submitted a letter to EPA and the MA DWPC that provided a description of the progress the Company was making to meet the limitations of their new permit. This letter explains that Fletcher Granite had determined it was feasible to separate the two flows, "quarry [storm] water and saw cooling water" and that "[s]ince the 'quarry water' originates as precipitation, we consider that recycling of this flow is not feasible, and that it will always be subject to the irregularities of precipitation. The 'saw cooling water', which is the primary origin of the suspended solids and turbidity, can certainly be recycled in part."

On December 12, 1974, Fletcher Granite submitted engineering plans for treating both the saw contact cooling water and quarry stormwater. Working with a local consulting firm, the Company determined "that in order to satisfy the requirements imposed upon us as to water quality, we will have to treat all of the water which we discharge from our quarry." The letter and engineering plans called for a storage lagoon to be built in a worked-out gravel pit outside of the quarry and the removal of suspended solids by using polymer addition in a rapid mix tank and settling in one of two concurrent detention basins, also to be built in the gravel pit. "The clear water will flow from the detention basins into Gilson's Brook."

In a letter dated May 13, 1975, the Company explains that they had changed plans for dealing with the two wastewater streams. Based on pilot testing, they determined that quarry wire saw cooling water

was the source of "virtually all of the suspended solids and turbidity" observed in the discharge. Therefore, quarry stormwater would be discharged directly to the "receiving stream" while saw cooling water would be treated "in a full-scale treatment plant" and, "[a]lthough we expect the treatment plant effluent to be acceptable on solids and turbidity for discharge, we will return it to our reservoir for reuse." The letter includes a description of an expanded treatment process[3] and the expectation that it would commence operating by July 1st of that year. There is no record of EPA agreeing to or modifying the permit to allow a change in the location of the discharge of the saw cooling water. Nevertheless, the Company redirected its process discharge and changed its sampling, both inconsistent with the terms of the permit.

On October 27, 1975, the Company submitted a letter that included monthly sampling results for July through September showing low TSS and turbidity levels, well within permit limits. These results, however, (and those going forward) represented only the quarry stormwater, also called quarry dewatering, since that was the only waste stream being discharged directly to Gilson Brook. The letter also describes that the saw water treatment system was performing better than expected and that they had "been able to consistently put out a discharge to our reservoir with a total suspended solid content of under 10 mg/lit and a turbidity under 35 N.T.U." These pollutant levels, achieved by treatment before discharge, are similar to or below the permit limits.

Sampling results from stormwater discharges to the brook from January 1976 and March 1977 show high levels of TSS and turbidity. According to a letter from Fletcher Granite dated June 3, 1977, Mr. Robinson from the MA DWPC visited the facility on May 11, 1977, to review the status of the permit. The letter states that "Mr. Robinson noted that our reservoir does overflow into Gilson's [sp] brook for several months during the year. He informed us that we would need a discharge permit for this reservoir." An application was enclosed with the letter, seeking authorization to discharge from the reservoir.

A November 15, 1977, letter from Fletcher Granite explains an incident that was caused by the inadvertent discharge of process water directly to Gilson Brook through the quarry stormwater outfall. The letter provides a review of how the two waste streams are normally segregated including that process water "is put through a treatment plant and is recycled into our water supply."

On November 15, 1978, Fletcher Granite applied for reissuance of its discharge permit. The 1974 permit was administratively continued until the second permit was issued in 1987.

4. Records from 1978 through 1987

By letter dated April 22, 1986, Fletcher Granite informs EPA that:

> [o]ver the past few years we have been discharging this [process] water to a seepage pit which is [sic] allowed the water to percolate through the soil. The seepage pit is being retired. We are putting in a series of settling ponds to capture the fines from the saw waste water. After passing through these settling ponds the water will flow back into our water supply pond where

[3] Saw water would be passed through a cyclone for removal of silicon carbide, polymer addition in a rapid mix tank, slow mix in a flocculation tank, and two-hour settling in a detention tank.

> it will be reused for process water. We are also diverting our quarry dewatering water into the water supply pond. This will mean that the total discharge from the quarry will be recycled as process water, and that the discharge we will be monitoring will be that water that flows over the spillway of the quarry water supply pond.

On July 9, 1986, Stan Szczurko, from Massachusetts Department of Environmental Quality Engineering (DEQE), inspected the facility to update the file.[4] In a memo dated July 17, 1986, Mr. Szczurko describes the process operations at the quarry including that "[t]he spent process water, heavy with particulates is fed into a series of 4 man made settling lagoons. The effluent from these lagoons eventually reaches the process water supply pond and again is recycled. Only the overflow from this process water supply pond reaches Gilsons [sic] Brook. This overflow occurs during wet weather otherwise the overflow is negligible." Mr. Szczurko recommends, among other things, that engineering plans should be submitted that include "flow rates, settling lagoon sizing, and the O&M of these lagoons."

Although the Company began collecting samples from the outlet of Gilson Brook Pond starting early 1986, it wasn't until the issuance of the 2nd NPDES final permit, on February 25, 1987, that the outfall location was identified as the "overflow from quarry water supply pond to Gilson Brook." The permit fact sheet describes the process water as being treated by a series of settling ponds to remove fine stone dust and silicon carbide fines and then "recycled" back to the water supply pond. It also explains that the prior permit limits for TSS, turbidity, and pH were based on BPJ (i.e., best professional judgment of limits necessary to meet the technology requirements of the CWA), and the new permit limits are similar, with the addition of a BPJ daily maximum turbidity limit, based on the installation of the series of settling ponds and retirement of the seepage pit treatment method. Significantly, the discussion of the BPJ-based technology limits and treatment methods does not include reference to the water supply pond as a component of treatment. The fact sheet does not explain why the discharge outfall location in the permit was changed to the overflow from the pond to the brook rather than to the discharge to the pond.

5. Subsequent Permits

A brief letter was sent to EPA from Fletcher Granite, dated November 3, 1987, which states that "[o]ur Quarry Wire Saw operated during the past three months. We discharged the waste into an unused quarry hole. The quarry hole is just beginning to overflow, but as of this date the overflow has not reached the brook." The Company sent a similar letter to EPA dated January 28, 1988, which states that "[o]ur quarry saw operated during the months of October and November. We discharged the waste water into an old quarry hole. The water flowing from the old hole seeped into the ground before it reached the brook." The Company had again changed how it was managing the process water, by disposing of it in a quarry hole.

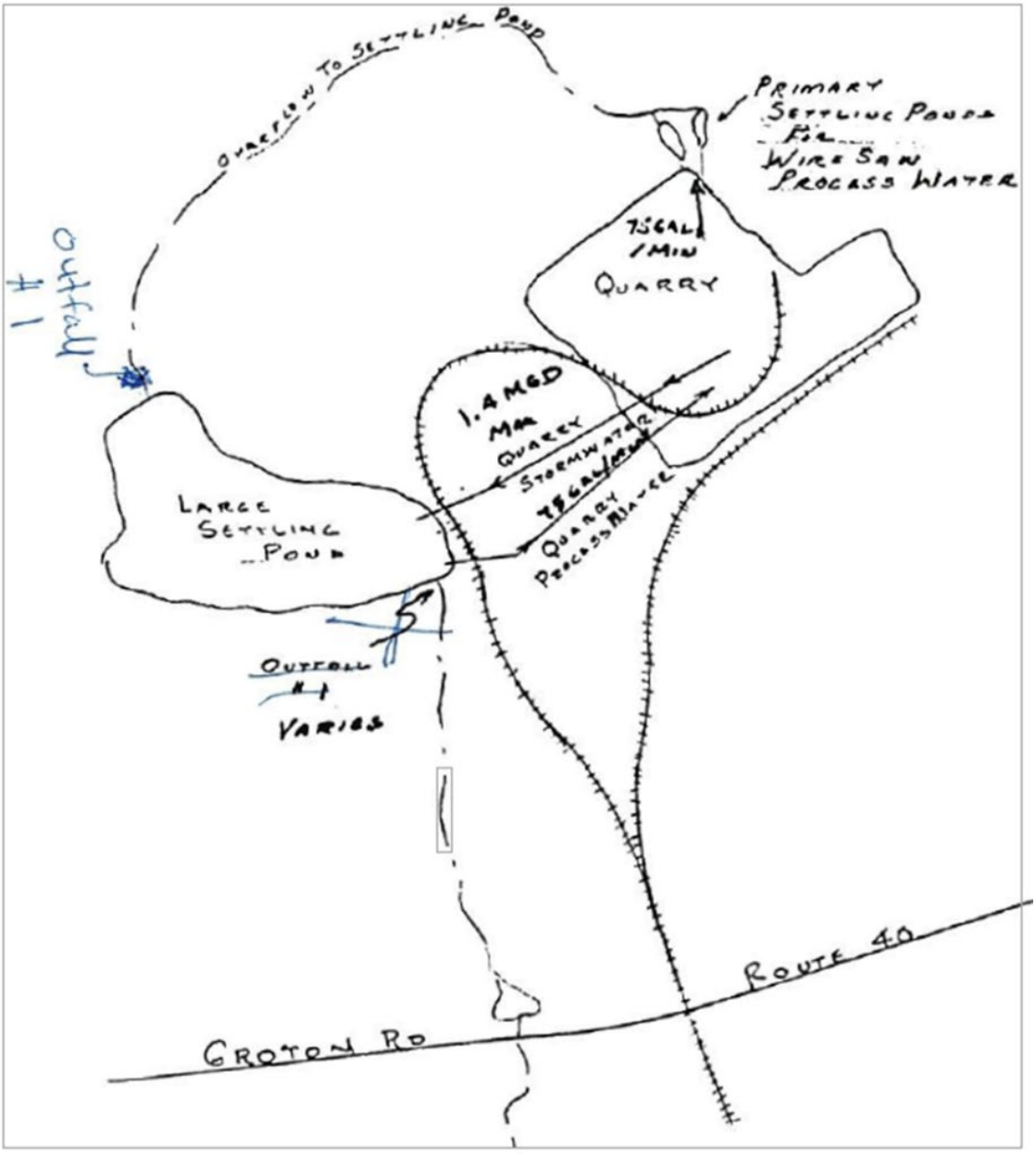
The April 21, 1992, permit application submitted to EPA from Fletcher Granite included a hand-drawn diagram of the facility (identical to Figure B3 but without the inked edits, described below), with the

[4] DEQE was the successor to the DWPC, and predecessor to the current Massachusetts Department of Environmental Protection.

water supply pond labeled “Large Settling Pond.” This appears to be the first instance on file that the pond was identified as a treatment (i.e., settling) pond, rather than just a cooling water supply pond, by the Company. Nevertheless, the fact sheet for the third draft NPDES permit again described the process water as being treated by the settling ponds to remove fine stone dust and silicon carbide fines and recycled back to the water supply pond, thus continuing the distinction between the settling ponds as treatment and Gilson Brook Pond as a water supply. The subsequent third NPDES permit, issued September 30, 1997, maintained the description of the outfall as “overflow from quarry supply pond to Gilson Brook.”

The Fletcher Granite permit application submitted April 10, 2001, included the following diagram (Figure B3), identical to the one submitted in 1992. It appears that the permit writer at that time made edits to this diagram, changing the outfall location from the pond outlet to the location where process water discharges into the pond. Indeed, the fourth draft permit, available for public comment on September 17, 2001, included a change in the designation of outfall 001 as “the discharge to the water supply pond.” The fact sheet recounted that the pond was a water of the U.S. and therefore “cannot be a regulated discharge pursuant to Section 402 of the Clean Water Act.”

Figure B3 – 2001 Fletcher Granite Water Flow Diagram



Fletcher Granite's comments on the draft permit, dated October 30, 2001, include the following excerpts (emphases added, footnote deleted):

> Fletcher Granite's quarry and production facility has not changed its operations in over 40 years. *There has been no change to the water received by the settling pond*. This water consists primarily of rainwater and groundwater that seeps into and is intermittently pumped from the quarry. In fact several months out of each year no water is pumped from the quarry as was the case during the most recent months of September and October, 2001. The settling pond is also used as a source of the cooling water for the quarry wiresaw. Nothing has changed with respect to Fletcher Granite's use of the settling pond to justify a new permit condition changing the

location of Outfall No. 1 from its discharge to Gilson Brook to the location where the quarry water discharges to the settling pond….

In addition, quarry wiresaw operations operate only seasonally – approximately 7 months out of the year. The volume of water attributable to the quarry wiresaw operations is minimal in contrast with the large volume of stormwater and groundwater that is discharged to Fletcher Granite's treatment pond.

There is no factual finding in the draft permit or the fact sheet supporting the assumption that the treatment pond is part of the waters of the United States and subject to regulation by the NPDES program. *The pond was constructed in 1936 by Fletcher Granite for the purposes of allowing sediments to settle out and to provide a water supply for quarry operations*.

As such, the pond is excluded from the definition of the waters of the United States. 40 CFR §122.2 provides:

> Waste treatment systems, including treatment ponds or Lagoons designed to meet the requirements of the (Clean Water Act) (other than cooling ponds as defined in 40 CFR §423.11(m) which also meet the criteria of this definition) are not waters of the United States.
>
> Because the settling pond is a body of water made by Fletcher Granite *for the purpose [of] treating water from the quarry pit*, it is a "waste treatment system" and excluded from the definition of waters of the United States. It is therefore, not subject to regulation by the NPDES program.

Without challenging the Company's erroneous and ahistorical assertions, the fourth final NPDES permit, issued to Fletcher Granite on April 8, 2003, changed the approach taken in the draft permit and again authorized the discharge from the "overflow from quarry supply pond to Gilson Brook." EPA explains this decision in the 2003 Response to Comments as follows:

> Among its comments on the draft permit (see number 5 above), the permittee disagreed that the "settling ponds" are waters of the United States based on the waste treatment exclusion in the regulatory definition of waters of the U.S. The waste treatment exclusion contains a caveat that the exclusion applies only to manmade bodies of water which neither were originally created in waters of the United States (such as disposal area in wetlands) nor resulted from impoundment of waters of the United States. Although the regulatory language which expresses this caveat has been suspended, EPA's interpretation of the scope of the waste treatment exclusion when evaluating jurisdiction on a case-by-case basis is generally consistent with the caveat.
>
> After further evaluation of the facts in this case, the Region has concluded that the settling ponds are not waters of the U.S. We base this primarily on the facts that the settling ponds were created in 1936, long before the enactment of the Clean Water Act, they have continuously been used as treatment systems, and the previous permits considered the settling ponds to be treatment units.

However, if the definition of water of the United States is redefined in such a way that the settling ponds are considered waters of the United States, we reserve the right to reopen the permit for an appropriate modification.

EPA's response appears to have confused the upland settling ponds with Gilson Brook Pond, or incorrectly assumed that the same facts applied to all of the ponds. In practice, EPA had always treated the upland settling ponds as part of the treatment system, in contrast with Gilson Brook Pond.

6. Current Information

GSC purchased the facility in 2009 and leased it back to the Company for two more years. Another final NPDES permit, issued June 24, 2010, carried forward the same outfall location description. EPA transferred the permit to GSC in 2011 after it assumed operations of the facility. GSC filed a timely application for permit reissuance with EPA, dated February 18, 2015. The facility's 2010 Permit has been administratively continued and therefore is currently in effect.

On November 15, 2018, EPA and the State conducted a site visit of the quarry. During this visit, the Agencies were told that the process water and quarry stormwater discharge to the pond through the same pipe, and the agency representatives observed a filter bag system that had been disconnected from the discharge pipe. This inspection revealed that at some point between 2001 and 2018, the Company or GSC stopped sending the process water through the series of settling ponds for treatment before discharging to Gilson Brook Pond, and instead combined the process water with the quarry stormwater for direct discharge to the pond. During a July 12, 2023, site visit, EPA representatives observed that the filter bag system had been removed, along with a significant amount of soil in and around the area where the filter bag had been. Crushed stone was piled in the excavated area, from the flexible quarry discharge pipe to the culvert, located approximately 25 feet. When discharging, quarry wastewater flows from the discharge pipe, downhill, over the crushed rock, into the culvert and through an underground pipe that discharges into Gilson Brook Pond below surface water level.

Further, the discharge location within the pond is located a mere several yards from the pond outlet, and this distance doesn't appear to be large enough to provide enough residence time to allow for settling. With that said, however, 2018 satellite imagery of the area shows high turbidity in the pond compared to the pond inlet and other nearby waterbodies, as seen in Figure B4 below. This turbidity could be attributed to stormwater runoff from elsewhere on the site or the "up-pond" movement of fine particles caused by wind dispersion or swelling of the pond from the discharge.

Figure B4 – 2018 Satellite Image of Granite State Concrete Company

7. Environmental Impacts of Discharges on Gilson Brook Pond

The Region could not locate any environmental data to assess the health of the Gilson Brook Pond ecosystem or pollutant levels within the pond. General observations regarding the health of the pond were made during EPA's site visit. Specifically, a beaver lodge was clearly seen in the pond and EPA was told that employees of the facility have been known to fish and had found, at times, certain large fish specimens. In addition, a small plate embedded in a stone along the bank of the pond reads "PROTECTED WETLANDS DO NOT ENTER." These observations do not, however, provide useful information on the level of stress to the aquatic community of Gilson Brook Pond. Given that years of solids have been discharged to the pond, it is reasonable to assume that the bottom consists of a layer of built-up sediment, which would likely adversely affect the benthic community, and the observed turbidity also likely adversely affects fish and other non-benthic organisms.

C. Summary and Jurisdictional Conclusion

EPA's definition of "waters of the United States," at 40 CFR §122.2, has excluded "waste treatment systems" since 1979.[5] The exclusion briefly applied "only to manmade bodies of water which neither were originally created in waters of the United State…nor resulted from the impoundment of waters of the United States."[6] However, EPA suspended this restriction on the scope of the exclusion in 1980,[7] and the suspension has remained in effect through the present. Therefore, the question whether Gilson Brook Pond is a water of the U.S. turns on whether it was built as a waste treatment system.

The earliest record that EPA has (the 1973 Richardson report discussed above), indicates that the pond was built in Gilson Brook in order for the Company to provide cooling water to the wire saws that cut the granite in the quarry. The Company did not discharge its combined process water and stormwater from the quarry to Gilson Brook Pond for treatment or settling, but rather discharged directly to Gilson Brook below the pond. The first NPDES permit issued to the Company in July 1974 reflected these facts.

Following issuance of the 1974 permit, the Company determined that the source of pollutants was in the quarry process water, not the quarry stormwater, and so segregated the waste streams and began treating the process water separately, continuing to discharge untreated stormwater to the brook downstream of Gilson Brook Pond. At various times from 1975 through 1987, the Company employed several different methods to treat or dispose of the process water, including 1) passing it through a cyclone for removal of silicon carbide, polymer addition in a rapid mix tank, slow mix in a flocculation tank, and two-hour settling in a detention tank; 2) discharging it into a "seepage pit" and allowing the wastewater to percolate though the soil; 3) discharging it through a series of four man-made settling lagoons; and 4) disposing of it in an unused quarry hole. None of these methods relied on Gilson Brook Pond to provide treatment or settling. Rather, if the process water was discharged at all, it was discharged to the pond AFTER treatment, to be reused as cooling water. The stormwater continued to discharge to Gilson Brook below the pond through at least April 1986.

The second NPDES permit, issued in 1987, changed the description of the outfall to "overflow from quarry supply pond to Gilson Brook." The 1997 permit was written in the same manner. Neither fact sheet for these permits explains EPA's rationale for not regulating the discharges at the point they entered Gilson Brook Pond, and they both state that the process water was treated by a series of settling ponds before being discharged back to the "water supply pond" (i.e., Gilson Brook Pond).

Not until the 2003 NPDES permit issuance (and reaffirmed in the 2010 permit) did EPA expressly state that Gilson Brook Pond was a waste treatment system and excluded from jurisdiction as a WOTUS pursuant to 40 CFR § 122.2. This was based on representations in the Company's 2001 comments on the draft permit, that the pond had been originally constructed in 1936 and consistently used over the past 40 years as a treatment system for settling solids. However, as discussed above, this characterization was not accurate – it was constructed as a source of cooling water for the granite-cutting saws, and for years the Company discharged quarry process and quarry stormwater to the

[5] 44 Fed. Reg. 32,854 (June 7, 1979)
[6] 45 Fed. Reg. 33,290 (May 19, 1980)
[7] 45 Fed. Reg. 48,620 (July 21, 1980)

brook below the pond and provided treatment by a variety of methods to the process water before discharge. Even after the discharges were relocated to the pond, the process water was treated first. Moreover, as shown in the photograph in Figure B4, the process water now discharges to the pond just above the outlet to the brook, so any "treatment" being provided – even passive settling – is marginal at best. However, as noted above, Figure B4 also shows that the pond has been noticeably impacted compared to the pond inlet and neighboring water bodies.

It is unfortunate that the Region mistakenly concluded in 2003 (based in part on inaccurate statements by the Company) that the pond was a waste treatment system within the jurisdictional exclusion of 40 CFR § 122.2 (where the definition of "waters of the U.S. was located at the time). However, a prior mistake of fact or interpretation is not a legal basis for continuing to decline to assert jurisdiction over the pond. Further, a reversal of the prior decision will not work a hardship on GSC, since it (and its predecessor) has benefitted for years from not having to install or operate the level of treatment that would have been required in the absence of EPA's mistake (such as the treatment apparently installed and operated in 1975 but later abandoned).

Finally, the Region has reviewed the waste treatment system exclusion in the Agency's "Revised Definition of Waters of the U.S." rule published on January 18, 2023 (88 Fed. Reg. 3109, 3004-3144) and in the "Revised Definition of Waters of the U.S. Rule: Conforming Rule" published September 8, 2023 (88 Fed. Reg. 61964), and has concluded that Gilson Brook Pond is not a waste treatment system that is excluded from the definition of "waters of the United States;" it is a water of the United States. It was not a waste treatment system when it was constructed, nor was it used for that purpose for many years following construction and initial NPDES permitting. There is no evidence that Gilson Brook Pond was created as a "[w]aste treatment system … designed to meet the requirements of the Clean Water Act." 40 CFR § 120.2(b)(1).

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY – REGION 1 (EPA)
WATER DIVISION
5 POST OFFICE SQUARE
BOSTON, MASSACHUSETTS 02109

MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION (MASSDEP)
COMMONWEALTH OF MASSACHUSETTS
1 WINTER STREET
BOSTON, MASSACHUSETTS 02108

EPA PUBLIC NOTICE OF A DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE INTO WATERS OF THE UNITED STATES UNDER SECTION 402 OF THE CLEAN WATER ACT (CWA), AS AMENDED, AND MASSDEP PUBLIC NOTICE OF EPA REQUEST FOR STATE CERTIFICATION UNDER SECTION 401 OF THE CWA.

PUBLIC NOTICE PERIOD: **January 14, 2025 – February 13, 2025**

NAME AND MAILING ADDRESS OF APPLICANT:

Granite State Concrete Co., Inc.
534 Groton Road
Westford, MA 01886

NAME AND ADDRESS OF THE FACILITY WHERE DISCHARGE OCCURS:

Granite State Concrete Co., Inc.
534 Groton Road
Westford, MA 01886

RECEIVING WATER AND CLASSIFICATION:

Gilson Brook Pond (part of Gilson Brook), tributary to Stony Brook
Merrimack River Watershed

PREPARATION OF THE DRAFT PERMIT AND EPA REQUEST FOR CWA § 401 CERTIFICATION:

EPA is issuing for public notice and comment the Draft NPDES Permit for the Granite State Concrete Co., Inc., which discharges quarry process water, stormwater and groundwater. The effluent limits and permit conditions have been drafted pursuant to, and assure compliance with, the CWA, including EPA-approved State Surface Water Quality Standards at 314 CMR 4.00. MassDEP cooperated with EPA in the development of the Draft NPDES Permit. MassDEP retains independent authority under State law to publish for public notice and issue a separate Surface Water Discharge Permit for the discharge, not the subject of this notice, under the Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 26-53.

In addition, EPA has requested that MassDEP grant or deny certification of this Draft Permit pursuant to Section 401 of the CWA and implementing regulations. Under federal regulations governing the NPDES program at 40 Code of Federal Regulations (CFR) § 124.53(e), state certification shall contain conditions that are necessary to assure compliance with the applicable provisions of CWA sections 208(e), 301, 302, 303, 306, and 307 and with appropriate requirements of State law, including any conditions more stringent than those in the Draft Permit that MassDEP finds necessary to meet these requirements. Furthermore, MassDEP may provide a statement of the extent to which each condition of the Draft Permit can be made less stringent without violating the requirements of State law.

INFORMATION ABOUT THE DRAFT PERMIT:

The Draft Permit and explanatory Fact Sheet may be obtained at no cost at https://www.epa.gov/npdes-permits/massachusetts-draft-individual-npdes-permits or by contacting:

Sharon DeMeo
U.S. Environmental Protection Agency – Region 1
5 Post Office Square, Suite 100 (06-4)
Boston, MA 02109-3912
Telephone: (617) 918-1995
Email: demeo.sharon@epa.gov

Any electronically available documents that are part of the administrative record can be requested from the EPA contact above.

PUBLIC COMMENT AND REQUESTS FOR PUBLIC HEARINGS:

All persons, including applicants, who believe any condition of this Draft Permit is inappropriate must raise all reasonably ascertainable issues and submit all reasonably available arguments supporting their position by **February 13, 2025,** which is the close of the public comment period. Comments, including those pertaining to EPA's request for CWA § 401 certification, should be submitted to the EPA contact at the address or email listed above. Comments submitted in hard copy form must also be emailed to the EPA contact above. Upon the close of the public comment period, EPA will make all comments available to MassDEP. All commenters who want MassDEP to consider their comments in the state decision-making processes (i.e., the separate state permit and the CWA § 401 certification) must submit such comments to MassDEP during the state comment period for the state Draft Permit and CWA § 401 certification. For information on submitting such comments to MassDEP, please follow the instructions found in the state public notice at: https://www.mass.gov/service-details/massdep-public-hearings-comment-opportunities.

Any person, prior to the close of the EPA public comment period, may submit a request in writing to EPA for a public hearing on the Draft Permit under 40 CFR § 124.10. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public hearing may be held after at least thirty days public notice if the Regional Administrator finds that response to this notice indicates significant public interest. In reaching a final decision on this Draft Permit, the Regional Administrator will respond to all significant comments and make the responses available to the public.

FINAL PERMIT DECISION:

Following the close of the comment period, and after a public hearing, if such hearing is held, the Regional Administrator will issue a final permit decision and notify the applicant and each person who has submitted written comments or requested notice.

KEN MORAFF, DIRECTOR
WATER DIVISION
UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY – REGION 1

LEALDON LANGLEY, DIRECTOR
DIVISION OF WATERSHED MGMT
MASSACHUSETTS DEPARTMENT OF
ENVIRONMENTAL PROTECTION