CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

In the matter of: **CALATLANTIC GROUP, INC., CONTRA COSTA COUNTY** **Violations of Construction Stormwater General Permit (NPDES No. CAS000002, Order No. 2009-0009-DWQ)**	)	**SETTLEMENT AGREEMENT AND STIPULATION FOR ENTRY OF ADMINISTRATIVE CIVIL LIABILITY ORDER** **PROPOSED** **ORDER**

Section I: INTRODUCTION

This Settlement Agreement and Stipulation for Entry of Administrative Civil Liability Order (Stipulated Order) is entered into by and between the California Regional Water Quality Control Board, San Francisco Bay Region (Regional Water Board), Regional Water Board prosecution staff, and CalAtlantic Group, Inc. (Settling Respondent) (collectively, Parties), and is presented to the Regional Water Board or its delegate for adoption as an Order by settlement pursuant to Government Code section 11415.60. This Stipulated Order resolves all the violations alleged herein by imposing administrative civil liability against the Settling Respondent in the amount of $549,600.

Section II: RECITALS

1. CalAtlantic owns The Preserve Project (formerly Faria Preserve) (Site), a residential development in the City of San Ramon. The Site is open space east of Bollinger Canyon Road, west of Interstate 680, north of Deerwood Road, and south of Las Trampas Ridge. CalAtlantic is developing 618 residential units and associated amenities at the Site, including a community park and an educational facility.

2. The Site is located within the headwaters of San Ramon Creek, part of the Walnut Creek watershed, which eventually drains through the cities of Walnut Creek and Concord and then into Suisun Bay.

3. On May 4, 2016, CalAtlantic submitted a notice of intent to obtain coverage for the Site under the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, NPDES Permit No. CAS000002, most recently issued through Order No. 2009-009-DWQ and amended by Order Nos. 2010-0014-DWQ and 2012-0006-DWQ (Permit). The Permit regulates stormwater

management practices and discharges at sites authorized to discharge pursuant to the Permit.

4. Regional Water Board prosecution staff alleges the following violations, discussed further in Exhibit A:

   a. CalAtlantic failed to minimize or prevent pollutants in stormwater discharges through the use of controls, structures, and management practices that achieve best conventional pollutant control technology for conventional pollutants when it discharged sediment-laden stormwater in violation of Permit Attachment D, section A, subsection 1.b.

   b. CalAtlantic failed to provide effective soil cover for inactive areas and all finished slopes, open space, and completed lots as required by Permit Attachment D, section D.2.

   c. CalAtlantic failed to maintain effective perimeter controls to sufficiently control sediment discharges from the Site as required by Permit Attachment D, section E.1.

   d. CalAtlantic failed to implement appropriate runoff and soil stabilization erosion control best management practices in conjunction with sediment control best management practices for areas under active construction as required by Permit Attachment D, section E.3.

5. To resolve the alleged violations in Section II, paragraph 4, by consent and without further administrative proceedings, the Parties have agreed to the imposition of an administrative civil liability of $549,600 against the Settling Respondent. Regional Water Board prosecution staff determined the proposed liability using Steps 1 through 10 of the State Water Resources Control Board's Water Quality Enforcement Policy (Enforcement Policy) (October 2017) as shown in Exhibit A, which is incorporated herein by reference. Payment of $285,600 to the State Water Pollution Cleanup and Abatement Account is due no later than 30 days following the Regional Water Board or its delegate executing this Order. The remaining $264,000 in penalties shall be suspended upon completion of the Settling Respondent's payment funding the Supplemental Environmental Project (SEP) described in Section III, paragraph 8.b.

6. The Parties have agreed to settle this matter without administrative or civil litigation, and to present this Stipulated Order to the Regional Water Board or its delegate for adoption as a Stipulated Order by settlement pursuant to Government Code section 11415.60.

7. Regional Water Board prosecution staff contends that the resolution of these alleged violations is fair and reasonable, and fulfills all of its enforcement objectives; that no further action is warranted concerning the alleged violations, except as provided in this Stipulated Order; and that this Stipulated Order is in the public's best interest.

Section III: STIPULATIONS

The Parties incorporate the foregoing Recitals and stipulate to the following:

8. **Administrative Civil Liability:** The Settling Respondent hereby agrees to the imposition of an administrative civil liability totaling $549,600 to resolve the alleged violations set forth in Section II, paragraph 4, as follows:

   a. No later than 30 days after the Regional Water Board or its delegate signs this Stipulated Order, the Settling Respondent shall submit a check for $285,600 made payable to "State Water Pollution Cleanup and Abatement" referencing the Order number on page one of this Stipulated Order, to:

      State Water Resources Control Board Accounting Office
      Attn: ACL Payment
      P.O. Box 1888
      Sacramento, CA 95812-1888

      The Settling Respondent shall email a copy of the check to the State Water Resources Control Board, Office of Enforcement (Laura.Drabandt@waterboards.ca.gov), and the Regional Water Board (Brian.Thompson@waterboards.ca.gov).

   b. The Parties agree that the remaining $264,000 of the administrative liability shall be paid to the Regional Monitoring Program, care of the San Francisco Estuary Institute, for implementation of a Supplemental Environmental Project (SEP), which includes two studies: "Suspended Sediment Settling Velocity Study, South San Francisco Estuary" and "Suisun Bay Sediment Flux and Flocculation Study, Benicia Bridge":

      i. $264,000 (SEP Amount) shall be paid in the manner described in Section III, paragraph 8.b.ii, solely for use toward the SEP Fund for the "Suspended Sediment Settling Velocity Study, South San Francisco Estuary" and "Suisun Bay Sediment Flux and Flocculation Study, Benicia Bridge" studies. Funding these studies will fund data collection to improve models of sediment transport for the San Francisco Estuary and fund reanalysis of the existing model of sediment flux for Suisun Bay respectively. A complete description of these studies is provided in Exhibit B, incorporated herein by reference.

      ii. No later than 30 days after the Regional Water Board or its delegate signs this Stipulated Order, the Settling Respondent shall submit a check for $264,000 made payable to "Regional Monitoring Program" and referencing the Order number on page one of this Stipulated Order, to:

         Regional Monitoring Program
         c/o San Francisco Estuary Institute
         4911 Central Avenue
         Richmond, CA 94804

The Settling Respondent shall email a copy of the check to the State Water Resources Control Board, Office of Enforcement (Laura.Drabandt@waterboards.ca.gov) and the Regional Water Board (Brian.Thompson@waterboards.ca.gov).

9. **SEP Description:** The Parties agree that the Settling Respondent's payment of the SEP Amount is a SEP, and that the SEP Amount shall be treated as a permanently suspended administrative civil liability for purposes of this Stipulated Order. The Settling Respondent's SEP obligations shall be satisfactorily completed upon the San Francisco Estuary Institute's written notification to the Regional Water Board and the Settling Respondent. The written notification will acknowledge that the Regional Monitoring Program received the SEP Amount from the Settling Respondent and that the payment will be spent on the project described in Section III, paragraph 8.b.i, and Exhibit B in accordance with the terms of this Stipulated Order. The San Francisco Estuary Institute's annual and quarterly financial reports to the Regional Water Board shall be considered a final post-project accounting of expenditures.

10. **Publicity Associated with the SEP:** Whenever the Settling Respondent or its agents or subcontractors publicize one or more elements of the SEP, they shall state in a prominent manner that the project is undertaken as part of a settlement to a Regional Water Board enforcement action against the Settling Respondent.

11. **Regional Water Board Not Liable:** The Regional Water Board and its members, staff, attorneys, and representatives shall not be liable for any injury or damage to persons or property resulting from negligent or intentional acts or omissions by the Settling Respondent or its directors, officers, employees, agents, representatives, or contractors in carrying out activities pursuant to this Stipulated Order. The Regional Water Board and its members, staff, attorneys, and representatives shall not be held as parties to, or guarantors of, any contract entered into by the Settling Respondent or its directors, officers, employees, agents, representatives, or contractors in carrying out activities pursuant to this Stipulated Order.

12. **Compliance with Applicable Laws:** The Settling Respondent understands that payment of administrative civil liability in accordance with the terms of this Stipulated Order and/or compliance with the terms of this Stipulated Order is not a substitute for compliance with applicable laws, and that continuing violations of the type alleged herein may subject it to further enforcement, including additional administrative civil liability.

13. **Party Contacts for Communications related to this Stipulated Order:**

For the Regional Water Board:

Demir Worthington
San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, 14th Floor
Oakland, CA 94612
Demir.Worthington@waterboards.ca.gov
(510) 622-2437

For CalAtlantic:

CalAtlantic Group, Inc.
Attn: Division President
2603 Camino Ramon, Ste. 525
San Ramon, CA 94583
Brian.Olin@lennar.com
(925) 242-0811

Counsel:
CalAtlantic Group, Inc.
Attn: Legal Department
700 NW 107th Ave., Ste. 400
Miami FL 33072
Tony.Boone@lennar.com
(281) 875-1000

14. **Attorney's Fees and Costs:** Except as otherwise provided herein, each Party shall bear all attorneys' fees and costs arising from the Party's own counsel relating to the matters set forth herein.

15. **Matters Addressed by this Stipulated Order:** Upon the Regional Water Board's or its delegate's adoption, this Stipulated Order represents a final and binding resolution and settlement of the alleged violations as of the effective date of this Stipulated Order. The provisions of this paragraph are expressly conditioned on the full payment of the administrative civil liability and SEP Amount by the deadlines specified in Section III, paragraphs 8.a and 8.b.ii.

16. **Public Notice:** The Settling Respondent understands that this Stipulated Order must be noticed for a 30-day public review and comment period prior to consideration by the Regional Water Board or its delegate. If significant new information is received that reasonably affects the propriety of presenting this Stipulated Order to the Regional Water Board or its delegate for adoption, Regional Water Board prosecution staff may unilaterally declare this Stipulated Order void and decide not to present it to the Regional Water Board or its delegate. The Settling Respondent agrees that it may not rescind or otherwise withdraw its approval of this proposed Stipulated Order.

17. **Addressing Objections Raised During Public Comment Period:** The Parties agree that the procedure contemplated for public review of this Stipulated Order and the Regional Water Board's or its delegate's adoption of this Stipulated Order is lawful and adequate. The Parties understand that the Regional Water Board or its delegate has the authority to require a public hearing on this Stipulated Order. If procedural objections are raised and the Regional Water Board or its delegate requires a public hearing prior to the Stipulated Order becoming effective, the Parties agree to meet and confer concerning any such objections, and may agree to revise or adjust the this Stipulated Order as necessary or advisable under the circumstances.

18. **Interpretation:** This Stipulated Order shall be construed as if the Parties prepared it jointly. Any uncertainty or ambiguity shall not be interpreted against any one Party. The Parties are represented by counsel in this matter.

19. **Modification:** The Parties shall not modify this Stipulated Order by oral representation made before or after its execution. All modifications must be in writing, signed by all Parties, and approved by the Regional Water Board or its delegate.

20. **If the Stipulated Order Does Not Take Effect:** If the Stipulated Order does not take effect because the Regional Water Board or its delegate does not approve it, or because the State Water Resources Control Board or a court vacates it in whole or in part, the Parties acknowledge that they expect to proceed to a contested evidentiary hearing before the Regional Water Board to determine whether to assess administrative civil liabilities for the underlying alleged violations, unless the Parties agree otherwise. The Parties agree that all oral and written statements and agreements made during the course of settlement discussions will not be admissible as evidence in the hearing, or used for any purpose including, but not limited to the following:

    a. Objections related to prejudice or bias of any of the Regional Water Board members or their advisors or any other objections that are premised in whole or in part on the fact that the Regional Water Board members or their advisors were exposed to some of the material facts and the Parties' settlement positions as a consequence of reviewing the Stipulated Order, and therefore may have formed impressions or conclusions prior to any contested evidentiary hearing on the violations alleged herein in this matter; or

    b. Laches or delay or other equitable defenses based on the time period for administrative or judicial review to the extent such period has been extended by these settlement proceedings.

21. **Waiver of Hearing:** The Settling Respondent has been informed of the rights Water Code section 13323, subdivision (b), provides and, if the settlement is adopted by the Regional Water Board or its delegate, hereby waives its right to a hearing before the Regional Water Board prior to the Stipulated Order's adoption. However, if the settlement is not adopted and if the matter proceeds to the Regional Water Board or State Water Resources Control Board for a hearing, the Settling Respondent does not waive its right to a hearing before an order is imposed.

22. **Waiver of Right to Petition or Appeal:** Except in the instance where the settlement is not adopted by the Regional Water Board or its delegate, the Settling Respondent hereby waives its right to petition the Regional Water Board's adoption of the Stipulated Order for review by the State Water Resources Control Board, and further waives its rights, if any, to appeal the same to a California Superior Court and/or any California appellate-level court. This explicit waiver of rights includes potential future decisions by the Regional Water Board or its delegate directly related to this Stipulated Order.

23. **Covenant Not to Sue:** The Settling Respondent covenants not to sue or pursue any administrative or civil claims against the State of California, any State agency, or its officers, Board members, employees, representatives, agents, or attorneys arising out of or relating to any matter expressly addressed by this Stipulated Order or the SEP.

24. **No Admission of Liability/No Waiver of Defenses:** In settling this matter, the Settling Respondent does not admit to liability, admit to the truth of the findings or allegations made by the Regional Water Board prosecution staff, admit to any of the findings in this Stipulated Order or its attachments, or admit to any violations of the Clean Water Act, Water Code, the Permit, any other Regional Water Board order, or any other federal, State, or local law or ordinance, but recognizes that this Stipulated Order may be used as evidence of a prior enforcement action consistent with Water Code section 13327 and the Enforcement Policy. By entering into this Stipulated Order, the Settling Respondent does not waive any defenses or arguments related to any new enforcement action the Regional Water Board may bring in the future.

25. **Necessity for Written Approvals:** All approvals and decisions of the Regional Water Board under the terms of this Stipulated Order shall be communicated to the Settling Respondent in writing. No oral advice, guidance, suggestions, or comments from Regional Water Board employees or officials regarding submissions or notices shall be construed to relieve the Settling Respondent of its obligation to obtain any final written approval this Stipulated Order requires.

26. **Authority to Bind:** Each person executing this Stipulated Order in a representative capacity represents and warrants that he or she is authorized to execute this Stipulated Order on behalf of, and to bind, the entity on whose behalf he or she executes the Stipulated Order.

27. **No Third-Party Beneficiaries:** This Stipulated Order is not intended to confer any rights or obligations on any third party, and no third party shall have any right of action under this Stipulated Order for any cause whatsoever.

28. **Severability:** This Stipulated Order is severable; if any provision is found to be invalid, the remainder shall remain in full force and effect.

29. **Counterpart Signatures; Facsimile and Electronic Signature:** This Stipulated Order may be executed and delivered in any number of counterparts, each of which when executed and delivered shall be deemed to be an original, but such counterparts shall together constitute one document. Furthermore, this Stipulated Order may be executed by facsimile or electronic signature, and any such facsimile or electronic signature by any Party hereto shall be deemed to be an original signature and shall be binding on such Party to the same extent as if such facsimile or electronic signature were an original signature.

30. **Effective Date**: This Stipulated Order shall be effective and binding on the Parties upon the date the Regional Water Board or its delegate enters the Order incorporating the terms of this Stipulated Order.

IT IS SO STIPULATED.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION, PROSECUTION STAFF

Date: April 14, 2020

By: Lisa Horowitz McCann
Digitally signed by Lisa Horowitz McCann
Date: 2020.04.14 09:43:44 -07'00'
Water Boards

Lisa Horowitz McCann
Assistant Executive Officer

CALATLANTIC GROUP, INC.

Date: 4/21/2020

By: DocuSigned by: Brian Olin A65B03A8A60E4A5...

Brian Olin, Vice President

ORDER OF THE REGIONAL WATER BOARD

1. This Order incorporates the foregoing Sections I through III by this reference as if set forth fully herein.

2. In accepting this Stipulated Order, the Regional Water Board or its delegate has considered, where applicable, each of the factors prescribed in Water Code section 13385, subdivision (e), and has applied the State Water Resource Control Board's Enforcement Policy, which is incorporated by reference herein. The consideration of these factors and application of the Enforcement Policy are based on information the Regional Water Board prosecution staff obtained in investigating the allegations set forth in the Stipulated Order or otherwise provided to the Regional Water Board.

3. This is an action to enforce the laws and regulations administered by the Regional Water Board. The Regional Water Board or its delegate finds that issuance of this Order is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, § 21000 et seq.) in accordance with section 15321, subdivision (a)(2), Title 14, of the California Code of Regulations. Additionally, this Order generally accepts the plans proposed for the SEP prior to implementation. Mere submittal of plans is exempt from CEQA because submittal will not cause a direct or indirect physical change in the environment.

4. The Executive Officer of the Regional Water Board is authorized to refer this matter directly to the Attorney General for enforcement if the Settling Respondent fails to perform any of its obligations under this Stipulated Order.

IT IS HEREBY ORDERED pursuant to Water Code section 13323 and Government Code section 11415.60, on behalf of the California Regional Water Quality Control Board, San Francisco Bay Region.

_____ _____

Michael Montgomery Date
Executive Officer
California Regional Water Quality Control Board
San Francisco Bay Region

Attachments: Exhibit A – Factors in Determining Administrative Civil Liability
Exhibit B – Study Description for Supplemental Environmental Project (SEP) Fund

Exhibit A

Factors in Determining

Administrative Civil Liability

CALATLANTIC GROUP, INC.
VIOLATIONS OF CONSTRUCTION STORMWATER GENERAL PERMIT AT THE PRESERVE PROJECT (FORMERLY FARIA PRESERVE) SUBDIVISION 9342, SAN RAMON, CONTRA COSTA COUNTY

The State Water Resources Control Board Water Quality Enforcement Policy (Enforcement Policy) establishes a methodology for assessing administrative civil liability.[1] Use of the methodology addresses the factors required by Water Code sections 13327 and 13385, subdivision (e). Each factor in the Enforcement Policy and its corresponding category, adjustment, and amount for each of the four violations is presented below.

References for reports cited in footnotes are listed at the end of this assessment.

ALLEGED VIOLATIONS

Violation 1: Unauthorized Discharge of Pollutants in Stormwater to Waters of the United States in Violation of Permit Attachment D, Section A.1.b

CalAtlantic Group, Inc. (CalAtlantic), violated Permit Attachment D, section A.1.b, by failing to minimize or prevent the discharge of at least **50,000 gallons** of polluted stormwater from The Preserve Project at Subdivision 9342, San Ramon (Site), on at least **1 day** between November 21 and 24, 2018. Polluted stormwater discharged onto Bollinger Canyon Road; the storm drains on that road drain to Bollinger Canyon Creek, a water of the State and United States. CalAtlantic is subject to administrative civil liability for this violation pursuant to Water Code sections 13385(a)(2) and 13385(c)(2). The proposed liability is $78,000.

Sediment discharged over a silt fence and through the Bollinger Canyon Road entrance during a November 21 through 24, 2018, storm. This liability assessment conservatively estimates the volume of offsite discharge during a relatively intense, seven-hour period of rain during the four-day storm. On November 23, 2018, approximately 0.7 inches of rain

[1] The State Water Board adopted the Enforcement Policy applicable to the alleged violations on April 4, 2017, effective October 5, 2017.

fell between noon to 7:00 p.m.[2] over a minimum watershed area of 170,000 square feet,[3] generating approximately 50,000 gallons of polluted stormwater runoff.[4]

Violation 2: Inadequate Soil Cover on Inactive Areas in Violation of Permit Attachment D, Section D.2.

CalAtlantic violated Permit Attachment D, section D.2, by failing to install adequate soil cover on inactive construction areas for **47 days**. CalAtlantic is subject to administrative civil liability for this violation pursuant to Water Code sections 13385(a)(2) and 13385(c)(1). The proposed liability is $169,200.

City of San Ramon staff observed and documented inadequate soil cover in the Central Creek Channel area on November 26, 2018,[5] and Water Board staff observed this continuing violation during an inspection on December 19, 2018.[6] These conditions continued until CalAtlantic made significant improvements in soil cover as of January 11, 2019.[7]

Violation 3: Ineffective Perimeter Controls in Violation of Permit Attachment D, Section E.1

CalAtlantic violated Permit Attachment D, section E.1, by failing to establish and maintain effective perimeter controls for **8 days**. CalAtlantic is subject to administrative civil liability for this violation pursuant to Water Code sections 13385(a)(2) and 13385(c)(1). The proposed liability is $40,300.

- City of San Ramon staff observed and documented ineffective perimeter controls along Bollinger Canyon Road on November 26, 2018, that included inadequately controlled runoff out the Bollinger Canyon Road entrance and offsite sediment discharges (e.g., silt fence failure).[8] Water Board staff observed improved controls at the entrance and repair of the silt fence on November 30, 2018,[9] for 5 days of violation.
- Water Board staff observed a perimeter control failure on December 19, 2018, along the creek that runs through the center of the Site (Central Creek). A silt fence installed to protect against discharges to the creek had failed and was overtopped with

[2] Daily incremental precipitation data were downloaded from the California Data Exchange Center, Query Tools (http://cdec.water.ca.gov/cgi-progs/queryCSV), on December 11, 2018, for the Danville Library Station (station identification DVB).
[3] This size of the watershed was estimated based on a Google Earth Pro image (dated April 2, 2018) of the western portion of the Site using Google Earth Pro measurement tools.
[4] The discharged volume was conservatively estimated for a limited runoff area (Faria Preserve Parkway at its west end) during a period of intense rainfall on the third day of the storm. Discharges also may have occurred before or after this period.
[5] San Ramon November 26 Report and Water Board October 16 and November 26 and 30 Report.
[6] Water Board December 19 Report.
[7] Water Board January 16 Report.
[8] San Ramon November 26 Report and Water Board October 16 and November 26 and 30 Report.
[9] Water Board October 16 and November 26 and 30 Report.

sediment. This perimeter control was repaired and improved by December 21, 2018,[10] for 3 days of violation.

Violation 4: Inadequate Erosion and Sediment Controls in Active Construction Areas in Violation of Permit Attachment D, Section E.3.

CalAtlantic violated Permit Attachment D, section E.3, by failing to implement adequate erosion controls in conjunction with sediment controls for areas under active construction for **52 days**. CalAtlantic is subject to administrative civil liability for this violation pursuant to Water Code sections 13385(a)(2) and 13385(c)(1). The proposed liability is $262,100.

On November 26, 2018, City of San Ramon staff observed inadequate erosion control (e.g., hydroseed/soil binder/compost blanket) and sediment controls (e.g., wattles/fiber rolls/compost socks and check dams) at the Site.[11] Water Board staff continued to observe erosion and sediment control violations during inspections on November 30 and December 19, 2018, at various locations across the Site (e.g., construction of Faria Preserve Parkway, roads used in Neighborhoods 4 and 5, and construction of Via Veneto and Neighborhood 2).[12] Observations included large areas of disturbed soil with missing or not maintained erosion controls (e.g., no or sparse hydromulch, no plastic cover, etc.) and missing or inadequate sediment controls (e.g., straw waddles, check dams, or other controls not installed, spaced too far apart, or too far away to be effective). CalAtlantic significantly improved erosion and sediment controls for the Site by January 16, 2019.[13]

ADMINISTRATIVE CIVIL LIABILITY CALCULATION STEPS

STEP 1 – ACTUAL OR POTENTIAL FOR HARM FOR DISCHARGE VIOLATION

Step 1 relates only to Violation 1. The "actual or potential harm" factor considers the harm to beneficial uses that resulted or that may result from exposure to the pollutants in the discharge, while evaluating the nature, circumstances, extent, and gravity of the violation. A three-factor scoring system is used for each violation or group of violations: (1) the degree of toxicity of the discharge; (2) the harm or potential harm to beneficial uses, and (3) whether the discharge is susceptible to cleanup or abatement.

Factor 1: The Degree of Toxicity of the Discharge

The Enforcement Policy specifies that a score between 0 and 4 be assigned based on a determination of the risk or threat of the discharged material to potential receptors. It

[10] CalAtlantic December 21 Report.
[11] San Ramon November 26 Report.
[12] Water Board October 16 and November 26 and 30 Report and Water Board December 19 Report.
[13] Water Board January 16 Report.

defines "potential receptors" as those identified considering human, environmental, and ecosystem health exposure pathways.

Violation 1: The degree of toxicity for the discharge violation is **moderate (2)**. Moderate is assigned when discharged material poses a moderate risk or threat to potential receptors (i.e., the chemical and/or physical characteristics of the discharged material have some level of toxicity or pose a moderate level of threat to potential receptors).

According to Permit Finding I.A.11, the primary stormwater pollutant at construction sites is excess sediment. Sediment discharged from the Site included Site soil and applied materials, such as the aggregate material installed as road base for construction of the Faria Preserve Parkway road. The composition of aggregate base depends on where it was purchased, such as from a quarry, and if it contained any recycled material. Reclaimed asphalt pavement and crushed concrete are often used as aggregate material for road base. Reclaimed asphalt pavement contains pollutants such as polycyclic aromatic hydrocarbons and metals.[14] Crushed concrete is alkaline and elevates pH when in contact with water. The aggregate base used was a mixture of fine gravel (less than three-quarter-inch) and finer particles.[15] Based on CalTrans specifications, three-quarter-inch aggregate base contains from 30 to 65 percent fine-grained material (within a grain-size range of clay, silt, and fine sand), which would be susceptible to erosion and stormwater transport.[16]

Excess sediment in surface water clouds the water, which reduces the amount of sunlight reaching aquatic plants; clogs fish gills; smothers aquatic habitat and spawning areas; and impedes navigation in our waterways. Sediment also transports other pollutants, such as nutrients, metals, and petroleum compounds, such as is in fuels, oils and greases.

Elevated pH from Site operations may cause decreased reproduction, reduced biodiversity, decreased growth, and damage to skin, gills, olfactory organs, and eyes.[17]

Factor 2: Actual Harm or Potential Harm to Beneficial Uses

The Enforcement Policy specifies that a score between 0 and 5 be assigned based on a determination of whether direct or indirect harm, or potential for harm, from a violation is negligible (0) to major (5).

Violation 1: The actual or potential harm to beneficial uses from the discharge is below **moderate (2)**. A score of moderate is typified by observed or reasonably expected impacts where the harm or potential harm to beneficial uses is measurable in the short term but not considered appreciable.

[14] Environmental Impacts of Reclaimed Asphalt Pavement, New Jersey and U.S. Departments of Transportation, dated May 2017.
[15] Water Board December 19 Report.
[16] California Department of Transportation 2018 Standard Specifications, Section 26, Aggregate Bases.
[17] CADDIS Volume 2. Sources, Stressors and Responses: pH. United States Environmental Protection Agency. https://www.epa.gov/caddis-vol2/caddis-volume-2-sources-stressors-responses-ph. Downloaded March 14, 2017.

CalAtlantic discharged at least 50,000 gallons of sediment-laden stormwater to Bollinger Canyon Road storm drains and alkaline stormwater to Central Creek during a November 21 through 24, 2018, storm. This was the first rain of the wet season, and the Site was not adequately prepared for rain, as discussed further below under Violations 2 through 4.

CalAtlantic's management of Faria Preserve Parkway road construction did not control erosion and sediment transport to prevent or minimize offsite sediment discharges. Inspections conducted after the November 21 to 24 storm identified significant erosion and downslope sediment deposits from Faria Preserve Parkway to Bollinger Canyon Road and offsite storm drains,[18] which discharge to Bollinger Canyon Creek. Stormwater discharges were not fully characterized because the storm occurred from November 21 through 24 over the Thanksgiving 2018 holiday and the Permit does not require sampling outside regular Site business hours. CalAtlantic sampled at the start of the storm, between 9:30 a.m. and 3:11 p.m. on November 21, 2018, when approximately 0.1 inches of a total of 3.1 inches of rain had fallen and only 8 of 20 discharge locations had sufficient runoff for sampling.[19] Even at this early stage of the storm, the sampling data indicate that stormwater quality at the Site was starting to exceed the Permit's numeric action level for turbidity (250 nephelometric turbidity units [NTU]).[20] No sampling data are available to characterize the peak of the storm (the storm front passed through the area on November 22 and 23).

Stormwater discharges may also have exceeded the Permit's numeric action level for pH (8.5). The next sampling event at the Site occurred on November 26 after the November 21 to 24 storm, when the rain had stopped but stormwater runoff was still discharging at 2 of 20 discharge locations. The pH of stormwater discharging to the Central Creek was elevated at 10.2,[21] well above the numeric action level and the Basin Plan water quality objective of 8.5.[22]

The Basin Plan Table 2-1 lists beneficial uses of Bollinger Canyon Creek, a water of the United States, as warm and cold freshwater habitats, fish spawning, wildlife habitat, water contact recreation, and noncontact water recreation. Degraded water quality in Bollinger Canyon Creek from increased sediment and elevated pH in stormwater runoff from the Site had the potential to negatively impact organisms in the creek. The potential for harm to warm and cold freshwater habitats, fish spawning, and wildlife is considered below moderate.

Factor 3: Susceptibility to Cleanup or Abatement

The Enforcement Policy specifies that if a discharger cleans up 50 percent or more of the discharge, then a score of 0 is assigned. A score of 1 is assigned if less than 50 percent of

[18] San Ramon November Report and Water Board October 16 and November 26 and 30 Report.
[19] ENGEO November Report.
[20] Turbidity measured up to 262 NTU at the Purdue South drop inlet, CalAtlantic December 21 Report.
[21] pH was measured at 10.2 at the Central Channel West Dissipator, stormwater discharge sampling location S-7B, CalAtlantic November 26 Report.
[22] The Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) (Section 3-2) contains a pH water quality objective of 6.5 to 8.5 in surface water.

the discharge is susceptible to cleanup or abatement, or the discharge was susceptible to clean up but the discharger did not clean up 50 percent within a reasonable time.

The Susceptibility for Cleanup score is 1 because less than 50 percent of the discharge was susceptible to cleanup or abatement.

STEP 2 – ASSESSMENTS FOR DISCHARGE VIOLATION

Step 2 relates only to Violation 1. The Enforcement Policy specifies that when there is a discharge, an initial liability amount based on a per-gallon and/or per-day basis is determined from the Deviation from Requirement and the sum of the Potential for Harm scores from Step 1 above.

Deviation from Requirement

Violation 1: The **Deviation from Requirement** is **moderate**. Deviation from Requirement reflects the extent to which a violation deviates from the specific requirement that was violated. Moderate is assigned when the intended effectiveness of the requirement was partially compromised (e.g., the requirement was not met, and the effectiveness of the requirement was only partially achieved).

Dischargers must minimize or prevent pollutants in stormwater discharges through controls, structures, and management practices that use best conventional technologies to control pollutants, such as sediment and pH. CalAtlantic only partially achieved the effectiveness of this requirement. Controls installed on Faria Preserve Parkway were missing, spaced too far apart, or inadequately installed to control erosion and sediment transport, and perimeter controls installed along Bollinger Canyon Road to contain sediment onsite failed.[23] CalAtlantic implemented some controls, structures, and management to control erosion and sediment transport, but coverage was inadequate and the measures were ineffective at minimizing or preventing sediment discharges.

Per-Gallon and Per-Day Factors

Violation 1: The per-gallon and per-day factors are both **0.10**.

The sum of the three factors from Step 1 is 5. With a moderate Deviation from Requirement, the resulting per-gallon and per-day factors from the matrices in Tables 1 and 2 of the Enforcement Policy are 0.10. Both per-gallon and per-day factors are used below as allowed by statute.

INITIAL LIABILITY AMOUNT:

The initial liability for Violation 1 is calculated on a per-day and per-gallon basis is as follows:

[23] Water Board October 16 and November 26 and 30 Report.

Violation 1: Initial liability equals $50,000, calculated as $10,000 per day times the per-day factor of 0.10 times 1 day plus $10 per gallon times the per-gallon factor of 0.10 times 49,000 gallons (50,000 minus 1,000 gallons).

The Enforcement Policy allows for discretionary adjustments to the number of days of violation for multiple days of the same violation or dollars per gallon for high-volume discharges. No adjustments were made to the initial liability for this violation.

STEP 3 – PER-DAY ASSESSMENT FOR NON-DISCHARGE VIOLATIONS

Step 3 relates to Violations 2 through 4. The Enforcement Policy specifies that for non-discharge violations, an initial liability is determined from the maximum per-day liability multiplied by the number of days in violation and a per-day factor that ranges from 0.1 to 1 corresponding to the Potential for Harm and Deviation from Requirements. The Potential for Harm reflects the characteristics and/or the circumstances of the violation and its threat to beneficial uses. The Deviation from Requirement reflects the extent to which a violation deviates from the specific requirement that was violated.

Potential for Harm

Violation 2: The Potential for Harm associated with the soil cover violation is **minor** because the potential for offsite discharges in the inactive areas, where soil cover was missing or inadequate, was generally low, which reduced the threat to beneficial uses of surface water.

Construction was inactive and soil cover was either missing, inadequately installed, or not maintained over approximately 24 acres of the Site in the areas of Neighborhoods 2, 4, and 5 and Central Creek.[24] The potential for harm from this violation was low due to some mitigating circumstances in neighborhoods 2, 4, and 5. The inactive portion of Neighborhood 2 was in a distal portion of the Site; some downslope controls had been installed to potentially help control sediment discharges. Neighborhoods 4 and 5 were relatively flat, stormwater ponded in surface depressions, and other controls, such as containment berms and sediment basins, were installed to help control stormwater discharges. The highest threat to surface water was the inactive area around Central Creek, where slopes were steep and the distance to surface water was short. The extent of inadequate soil cover in this area was about one acre. While inadequate or missing soil cover is a serious concern because it helps to stop erosion (the source of sediment pollution), the overall threat of harm was considered low for the observed areas.

Violation 3: The Potential for Harm associate with the perimeter control violation is **moderate** because the failure of perimeter controls created a substantial threat of discharging pollutants that threaten beneficial uses.

[24] Inactive areas were determined by inspection observations, review of onsite erosion and sediment control plans, and discussions with onsite personnel (The Preserve Subdivision 9342 Inspections on October 16 and November 26 and 30, 2018, dated May 15, 2019). Areas estimated using GoogleEarth measuring tools.

Perimeter control at the Bollinger Canyon Road entrance was inadequate to minimize or prevent offsite sediment transport, and silt fences installed to protect offsite discharges to Central Creek via storm drains on Bollinger Canyon Road failed. Water Board staff observed sediment on Bollinger Canyon Road. The sediment deposits were left behind from turbid discharges of sediment-laden stormwater that transported sediment to waters of the United States. Drop inlet protection installed at one storm drain may have helped mitigate sediment discharges into the storm drain and Bollinger Canyon Creek; however, similar protection was not installed around the next storm drain down the street, where sediment deposits were also traced back to the Site.[25] At Central Creek, the failure of a silt fence control was within about 20 feet of a receiving water. Sediment deposits extended from the failed perimeter control to surface water[26] and likely allowed polluted stormwater to discharge to the creek during November or December 2018 storms.[27]

Violation 4: The Potential for Harm associated with the erosion and sediment control violation for areas of active construction is **moderate.**

The combination of erosion and sediment controls installed at the Site were not effective at minimizing or preventing stormwater pollution.[28] To address inadequacies, CalAtlantic constructed temporary catchments out of reinforced silt fences, gravel bags, and fiber rolls to contain muddy discharges, such as from downslope of Faria Preserve Parkway[29] and Appian Way construction.[30] These temporary catchments helped control sediment runoff once installed; however, the catchments leaked and were not designed as a basin in accordance with the CASQA Handbook.[31] Sediment that leaked through or around the catchments and sediment discharged in runoff prior to catchment construction were not controlled adequately and contributed to sediment-laden runoff from the Site. Catchment failure could have had more catastrophic consequences; thus the catchment was not an adequate replacement for the erosion and sediment controls that should have been installed in the upslope areas before the storm.

Deviation from Requirement

The best management practices CalAtlantic implemented to prepare for the 2018/2019 wet season deviated from Permit requirements. The Site was not adequately prepared for rain, and the time CalAtlantic needed to improve erosion and sediment controls and come into Permit compliance reflects the degree of deviation for each violation, as explained below.

Violation 2: The Deviation from Requirements for soil cover violation is **moderate** because the intended effectiveness of the management practices for this erosion and

[25] Water Board October 16 and November 26 and 30 Report.
[26] Water Board December 19 Report.
[27] Water Board December 19 Report.
[28] Water Board October 16 and November 26 and 30 Report and Water Board January 16 Report.
[29] Water Board October 16 and November 26 and 30 Report.
[30] Water Board December 19 Report.
[31] Permit Attachment D, Section E.2 requires sediment basin design in accordance with the CASQA Handbook (Sections SE-2).

sediment control were partially compromised. Areas of inactive construction had some soil cover, but the cover was mostly inconsistently applied or not maintained (e.g., Neighborhood 5 building pad) or missing (e.g., slopes above the Central Creek Channel)[32] for 47 days.

Violation 3: The Deviation from Requirements for the perimeter controls violation is **moderate** because the intended effectiveness of the management practices for this erosion and sediment control were partially compromised. Perimeter controls were generally installed around the Site, but multiple instances of violations, including inadequate protection (e.g., Bollinger Canyon Road entrance), failure (e.g., at Bollinger Canyon Road near Brookdale entrance and at Central Creek), and lack of maintenance (e.g., Central Creek) occurred over a 24-day period.[33]

Violation 4: The Deviation from Requirements for the erosion and sediment controls violation is **moderate** because the intended effectiveness of the management practices for this erosion and sediment control were partially compromised. The combination of erosion and sediment controls in active construction areas were inadequate or missing in many areas for at least 52 days. Controls installed for the construction of Faria Preserve Parkway were generally missing. Check dams and waddles installed to improve the controls were too widely spaced to slow runoff and minimize or prevent erosion and downslope sediment transport toward the Bollinger Canyon Creek entrance.[34] In the vicinity of Appian Way and Via Veneto construction, controls were missing for soil stockpiles, hydromulch was inconsistently applied, and fiber rolls were too widely spaced to control erosion and minimize or prevent muddy runoff during storms.[35] Reinforced silt fences installed to improve controls and capture sediment-laden runoff leaked[36] and were only temporary fixes. They were not installed as a sediment basin according to the CASQA Handbook method.[37]

Per-Day Factors

The resulting per day factors for Violations 2 through 4 are based on assessments of the Potential for Harm and Deviation from Requirement factors, in accordance with the matrix in Table 3 of the Enforcement Policy.

Violation 2: The per-day factor is **0.25.**

Violation 3: The per-day factor is **0.35.**

Violation 4: The per-day factor is **0.35**.

[32] Water Board October 16 and November 26 and 30 Report and Water Board December 19 Report.
[33] Water Board 16 and November 26 and 30 Report and Water Board December 19 Report.
[34] Water Board October 16 and November 26 and 30 Report.
[35] Water Board October 16 and November 26 and 30 Report, Water Board December 19 Report, and January 16 Report.
[36] Water Board October 16 and November 26 and 30 Report, Water Board December 19 Report, and January 16 Report.
[37] Permit Attachment D, Section E.2 requires sediment basin design in accordance with the CASQA Handbook (Sections SE-2).

INITIAL LIABILITY AMOUNT:

The initial liabilities for Violations 2 through 4 are calculated on a per-day basis is as follows:

Violation 2: **Initial liability equals $117,500**, calculated as $10,000 per day times the per-day factor of 0.25 times 47 days.

Violation 3: **Initial liability equals $28,000**, calculated as $10,000 per day times the per-day factor of 0.35 times 8 days.

Violation 4: **Initial liability equals $182,000**, calculated as $10,000 per day times the per-day factor of 0.35 times 52 days.

The Enforcement Policy allows for discretionary adjustments to the amount of days of violation for multiple days of the same violation. No adjustments were made to the initial liabilities for these violations.

STEP 4 – ADJUSTMENTS TO INITIAL LIABILITY

Step 4 relates to Violations 1 through 4. The Enforcement Policy specifies that three additional factors should be considered to potentially modify the initial liabilities: the discharger's culpability, its compliance history, and its efforts to clean up and/or cooperate with regulatory authorities.

Culpability

The Enforcement Policy specifies that higher liabilities should result from intentional or negligent violations as opposed to accidental violations. It specifies use of a multiplier between 0.75 and 1.5, with a higher multiplier for intentional or negligent behavior.

Violation 1: The culpability multiplier is **1.3** because CalAtlantic submitted a notice of intent to comply with the Permit and was aware of Permit Attachment D, section A.1.b, which requires the discharger to "…minimize or prevent pollutants in storm water discharges and authorized non-storm water discharges through the use of controls, structures, and management practices…." CalAtlantic did not take reasonable and prudent actions to prepare the Site for the 2018/2019 wet season and ensure that stormwater discharges from the first rainstorm were not polluted. This is the third consecutive year that the Site was inadequately prepared for the first rains. Water Board staff had many discussions with CalAtlantic about reducing sediment-laden runoff over the two prior wet seasons, as discussed further below for violations 2 through 4.

Violations 2 through 4: The culpability multiplier is **1.2** because CalAtlantic submitted a notice of intent to comply with the Permit and was aware of requirements in Attachment D, sections D.2 and E.1 through E.3, for soil cover in inactive areas (Violation 2), perimeter controls (Violation 3), and erosion and sediment controls for active areas (Violation 4). CalAtlantic did not take reasonable and prudent actions to prepare the Site for the 2018/2019 wet season, failing to install or maintain adequate erosion and sediment controls. Water Board staff had many discussions with CalAtlantic

about installing and maintaining effective erosion and sediment controls, including letters about erosion and sediment control violations during the 2016/2017 and the 2017/2018 wet seasons. Communications included notices of violations and inspection reports dated October 14, 2016, April 26, 2017, July 26, 2017, and May 30, 2018; discussions during field inspections with CalAtlantic and ENGEO personnel; and meetings over the course of the three wet seasons.

History of Violations

The Enforcement Policy provides that where there is a history of repeat violations, a minimum multiplier of 1.1 or greater should be used.

Violations 1 through 4: The history of violations multiplier is **1.2** because CalAtlantic has a recent history of similar violations. CalAtlantic did not adequately prepare the Site prior to rain for the two prior wet seasons (2016/2017 and 2017/2018). Water Board staff observed similar violations that included inadequate soil cover in inactive areas, inadequate perimeter controls, and unauthorized discharges of sediment-laden stormwater.[38] Past enforcement actions for violations include a $770,000 penalty against CalAtlantic (Administrative Civil Liability Order R2-2019-0005). A score of 1.2 is warranted based on the recent history of similar violations and recurring noncompliance with Permit requirements.

Cleanup and Cooperation

The Enforcement Policy provides for an adjustment to reflect the extent to which a discharger voluntarily cooperated in returning to compliance and correcting environmental damage. The adjustment is a multiplier between 0.75 and 1.5, with a higher multiplier where there is a lack of cooperation.

Violations 1 through 4: The cleanup and cooperation multiplier is **1.0** because CalAtlantic was cooperative with inspections, willing to meet to discuss site conditions and Permit requirements, and responsive in providing weekly progress reports. The amount of time needed to comply with the Permit, over a period of approximately two months, was not due to lack of cooperation or effort as much as the amount of work and level of effort needed to stop sediment-laden discharges and fix or improve erosion and sediment controls.

STEP 5 – DETERMINATION OF TOTAL BASE LIABILITY

The Total Base Liability is determined by applying the adjustment factors from Step 4 to the Initial Liability Amounts determined in Step 2 for the discharge violation and Step 3 for the non-discharge violations.

38 Water Board staff inspected the Site during the 2016/2017 wet season on August 17, September 30, October 14, 16, 17, 21, and 28, and December 15, 2016 (Faria Preserve Subdivision 9342 Inspections, August through December 2016, dated April 27, 2017) and during the 2017/2018 wet season on March 2 and October 27 and 30, 2018 (Faria Preserve Subdivision 9342 Inspection reports dated January 10 and October 30, 2018).

Violation 1: Total Base Liability equals $78,000 calculated from the initial liability of $50,000 times the Culpability Multiplier of 1.3 times the History of Violations Multiplier of 1.2 times the Cleanup and Cooperation Multiplier of 1.0.

Violation 2: Total Base Liability equals $169,200 calculated from the initial liability of $117,500 times the Culpability Multiplier of 1.2 times the History of Violations Multiplier of 1.2 times the Cleanup and Cooperation Multiplier of 1.0.

Violation 3: Total Base Liability equals $40,300 calculated from the initial liability of $28,000 times the Culpability Multiplier of 1.2 times the History of Violations Multiplier of 1.2 times the Cleanup and Cooperation Multiplier of 1.0.

Violation 4: Total Base Liability equals $262,100 calculated from the initial liability of $182,000 times the Culpability Multiplier of 1.2 times the History of Violations Multiplier of 1.2 times the Cleanup and Cooperation Multiplier of 1.0.

TOTAL BASE LIABILITY AMOUNT

The combined Total Base Liability for Violations 1 through is $549,600, the sum of $78,000, plus $169,200, plus $40,300, plus $262,100.

STEP 6 – ABILITY TO PAY AND TO CONTINUE IN BUSINESS

The Enforcement Policy provides that, if there is sufficient financial information to assess the discharger's ability to pay the Total Base Liability or to assess the effect of the Total Base Liability on the discharger's ability to continue in business, then the Total Base Liability amount may be adjusted downward if warranted.

In this case, there is sufficient information in the public record on file to support a finding of an ability to pay and continue to stay in business, and CalAtlantic is not disputing the matter. A downward adjustment is therefore unwarranted.

STEP 7 – OTHER FACTORS AS JUSTICE MAY REQUIRE

The Enforcement Policy provides that if the Regional Water Board believes that the amount determined using the above factors is inappropriate, the amount may be adjusted under the provision for "other factors as justice may require." The Enforcement Policy includes the costs of investigation and enforcement as "other factors as justice may require" that should be added to the liability amount.

No staff costs are proposed. Regional Water Board prosecution staff was engaged in settlement discussions prior to issuance of administrative civil liability order R2-2019-0005, and staff reentered settlement with CalAtlantic after observing the discharge alleged at the start of the 2018-2019 wet season. In the interest of good-faith negotiation, staff does not seek reimbursement for costs incurred to settle the alleged violations.

STEP 8 – ECONOMIC BENEFIT

The Enforcement Policy requires recovery of the economic benefit gained associated with the violations, plus 10 percent. Economic benefit is any savings or monetary gain derived from the act or omission that constitutes the violation.

CalAtlantic realized an economic benefit by delaying and avoiding costs associated with preparing the Site for the wet season. CalAtlantic did not implement effective erosion and sediment controls to control stormwater runoff, and sediment discharges from the Site overwhelmed perimeter controls and resulted in unauthorized discharges. CalAtlantic improved erosion and sediment controls and repaired or improved perimeter controls to come into compliance within 52 days. CalAtlantic avoided installing the level of controls needed to comply with the Permit until it started to rain. The estimated economic benefit, using the U.S. Environmental Protection Agency's Economic Benefit Model (BEN), version 2019.0.0, was not greater than the proposed liability.

The calculated economic benefit plus 10 percent is not greater than the proposed liability and therefore does not warrant an adjustment pursuant to the Enforcement Policy.

STEP 9 – MAXIMUM AND MINIMUM LIABILITY

a) ***Minimum Liability***

The statutory minimum liability that may be assessed is the economic benefit: $281,005. To comply with the Enforcement Policy, the minimum liability is the economic benefit plus ten percent: $309,100 (rounded).

b) ***Maximum Liability***

The maximum administrative civil liability is $1,570,000. This is based on the maximum allowed by Water Code section 13385(c)(1). Water Code section 13385 allows up to $10,000 for each day in which the violation occurs, and $10 for each gallon exceeding 1,000 gallons discharged and not cleaned up. The maximum liability is based on 50,000 gallons minus 1,000 gallons (49,000 gallons) for violation 1 and 108 days for violations 1 to 4.

STEP 10 – FINAL LIABILITY

The final liability proposed is $549,600 for Violations 1 through 4, based on consideration of the penalty factors discussed above. It is within the minimum and maximum liabilities.

REFERENCES

- **CalAtlantic November 26 Report** - The Preserve – Weekly Compliance Report, dated November 26, 2018.
- **CalAtlantic December 21 Report** - The Preserve – Weekly Compliance Report, dated December 21, 2018.
- **CalAtlantic January 11 Report** - The Preserve – Weekly Compliance Report, dated January 11, 2019.
- **ENGEO November 21 and 26 Report** – Numeric Action Level (NAL) Exceedance Report for November 21 and 26, 2018, Faria Preserve Subdivision 9342, dated December 3, 2018.
- **San Ramon November 26 Report** – City of San Ramon, Construction Site Inspection Report for Faria Preserve, Subdivision 9342, CalAtlantic, a Lennar Co. on November 26, 2018, dated November 26, 2018.
- **Water Board October 16 and November 26 and 30 Report** – The Preserve Subdivision 9342 Inspections on October 16 and November 26 and 30, 2018, dated May 15, 2019.
- **Water Board December 19 Report** – The Preserve Subdivision 9342 Joint-Agency Inspection on December 19, 2018, dated May 21, 2019.
- **Water Board January 16 Report** – The Preserve Subdivision 9342 Joint-Agency Inspections on January 16, 2019, reports dated May 21, 2019.

Exhibit B
Study Description for Supplemental Environmental Project (SEP) Fund for the Regional Monitoring Program for Water Quality in San Francisco Bay

Basic Information

Study #1 Name: Suspended Sediment Settling Velocity Study, South San Francisco Estuary

Study Budget, Total: $227,700

SFEI Contacts:
- Technical – Melissa Foley, melissaf@sfei.org, (510) 746-7345
- Financial – Jennifer Hunt, jhunt@sfei.org, (510) 746-7347

Study #2 Name: Suisun Bay Sediment Flux and Flocculation Study, Benicia Bridge

Study Budget, Total: $36,300

SFEI Contacts:
- Technical – Melissa Foley, melissaf@sfei.org, (510) 746-7345
- Financial – Jennifer Hunt, jhunt@sfei.org, (510) 746-7347

Study Descriptions

Study #1:
The goal of this work is to collect needed data on flocculation and changes in suspended sediment simultaneously in the channel and shoals of South San Francisco Estuary. These data will improve our understanding of sediment flocculation and ground-truth parameterizations of settling velocity collaborators to improve models of sediment transport in the San Francisco Estuary. This information will inform management questions regarding the beneficial reuse of dredged sediment, the sediment accretion in tidal marshes, and sources and trajectories of sediment-bound contaminants from watersheds and Bay margins into the Estuary. Informing these management questions is a priority of the San Francisco Bay Regional Monitoring Program for Water Quality. The Regional Monitoring Program will collect data in 2020 and a report will be generated by late 2021.

Study #2:
The goal of this study is to reanalyze existing sediment flux estimates for Suisun Bay at the Benicia Bridge. The existing estimate does not account for flocculation, which has

been found to be an important component of sediment transport in other locations of San Francisco Bay. Incorporating sediment flocculation into the calculations will provide robust sediment flux estimates for Suisun Bay, which are of interest because Suisun Bay is the entry point for sediment, nutrients, and contaminants from the Estuary's primary freshwater source, the Sacramento-San Joaquin Delta. The Regional Monitoring Program will reanalyze data from 2002-2019 to include flocculation dynamics and revise sediment flux estimates based on those findings.

Compliance with SEP Criteria

The studies comply with the following SEP criteria:

- Development and implementation of a monitoring program and/or study of surface water quality or quantity and/or the beneficial uses of the water.
- Nexus to violation(s) located within the same Water Board region in which the violation(s) occurred.

The studies go above and beyond applicable obligations of dischargers because of the following:

- The studies and associated products are above and beyond what is required in permits or orders issued by the Regional Water Board or what can be accomplished with dischargers' required monetary contributions to the Regional Monitoring Program for Water Quality in San Francisco Bay.

Study Milestones and Performance Measures

Study #1:
Field studies will be conducted in summer 2020 and initial findings will be presented to the RMP Sediment Workgroup in spring 2021. A final report will be available by January 2022, and the final dataset will be publicly available through the USGS ScienceBase-Catalog.

Study #2:
Data will be analyzed in 2020, and a draft report will be available in September 2020. The final technical report will be produced by September 2021. Data will be available on ScienceBase, a USGS public database.

Study Budget and Reports to Water Board

Pursuant to the October 2015 Supplement to the Memorandum of Understanding (MOU) between SFEI and the Regional Water Board, SFEI is responsible for identifying in each annual work plan and annual budget for the RMP those studies or elements, or portions of a study or element, that are to be funded by SEP funds. SFEI will keep a copy of accounting records of SEP fund contributions and expenditures separately from regular RMP funds. In its annual and quarterly financial reports to the Regional Water Board, SFEI will separately itemize SEP fund contributions and expenditures by each SEP funder.

SFEI will provide notice to the Regional Water Board within one month after receiving funds for the SEP and the notice will state SFEI's agreement to use the funds received as described herein.

Publicity

Pursuant to the 2015 MOU, SFEI will indicate on its Regional Monitoring Program website, and annual and other reports, that funding for the study is the result of settlement of "San Francisco Bay Water Board" enforcement actions.