

PROFESSIONAL SERVICES AGREEMENT

AGREEMENT

This Agreement is made and entered into this _____ day of _____, 2016 by and between the Fort Bragg Municipal Improvement District No. 1, a California Municipal Corporation, 416 N. Franklin Street, Fort Bragg, California, 95437 ("District"), and Applied Marine Sciences, 911 Center Street, Santa Cruz, California, 95060, a California corporation ("Consultant").

RECITALS

WHEREAS, District has determined that it requires the following professional services from a consultant: to provide water biological survey and outfall inspection services; and

WHEREAS, Consultant represents and warrants that it is fully qualified to perform such professional services by virtue of specialized experience and training, education and expertise of its principals and employees. Consultant further represents that it is willing to accept responsibility for performing such services in accordance with the terms and conditions set forth in this Agreement; and

WHEREAS, the legislative body of the District on August 22, 2016, by Resolution No. _____-2016 authorized execution of this Agreement on behalf of the District in accordance with Chapter 3.20 of the City Municipal Code and/or other applicable law;

NOW, THEREFORE, District and Consultant, for the consideration hereinafter described, mutually agree as follows:

1. DESCRIPTION OF SERVICES OR SCOPE OF WORK

The services to be performed under this Agreement ("Services") are as follows: Provide the Fort Bragg Municipal Improvement District No. 1 with water monitoring services and inspection of the outfall from District's wastewater treatment facility. The Services are further described in Consultant's proposal (the "Proposal"), which is attached to and made a part of this Agreement as Exhibit A.

2. TERM

The Agreement term will commence on August 26, 2016 and expire on March 31, 2017 unless the Agreement term is amended or the Agreement is terminated in accordance with its terms.

3. PAYMENT TERMS AND NOT TO EXCEED AMOUNT

District agrees to pay Consultant for Services that are actually performed in accordance with this Agreement. To be eligible for payment, Consultant invoices must be submitted

not more often than monthly to the District and list the Services performed and the amounts to be paid according to the cost categories and prices in the Proposal. In no event will the District's obligation to pay the Consultant under this Agreement exceed THIRTY-TWO THOUSAND SEVEN HUNDRED FIFTY-SIX DOLLARS (\$32,756.00) (the "Not to Exceed Amount"), unless this Agreement is first modified in accordance with its terms. Where the Proposal provides for compensation on a time and materials basis, Consultant must maintain adequate records to permit inspection and audit of Consultant's time and material charges under this Agreement. Consultant will make such records available to the District during normal business hours upon reasonable notice. In accordance with California Government Code § 8546.7, if the Not to Exceed Amount exceeds TEN THOUSAND DOLLARS (\$10,000.00), this Agreement and the Consultant's books and records related to this Agreement shall be subject to the examination and audit of the State Auditor, at the request of District or as part of any audit of the District, for a period of three (3) years after final payment under the Agreement.

4. TIME OF COMPLETION

Consultant must commence performance of the Services upon receipt of written direction to proceed from District. Consultant shall devote such time to the performance of services pursuant to this Agreement as may be reasonably necessary to meet the standard of performance provided in Section 7 below and to satisfy Consultant's obligations hereunder. Consultant will complete the Services in accordance with this Agreement by December 31, 2016 (the "Time of Completion"). The Time of Completion may only be modified by an amendment of the Agreement in accordance with its terms.

5. INDEPENDENT CONTRACTOR

Consultant and District agree that the Consultant will perform the Services as an independent contractor and not as an employee or agent of the District. Persons employed or utilized by Consultant in the performance of the Services will not be employees or agents of the District. Consultant is solely responsible for the payment of employment taxes incurred under this Agreement and any similar federal or state taxes.

6. SUBCONTRACTING

Consultant may subcontract portions of the Services upon the prior written approval of the District. Consultant will be solely responsible for payment of such subcontract Services. No contractual relationship will exist between any such subcontractors of the Consultant and the District.

Subcontractor agrees to be bound to Consultant and City in the same manner and to the same extent as Consultant is bound to City under the Agreement. Subcontractor further agrees to include the same requirements and provisions of this Agreement, including the indemnity and insurance requirements, with any sub-subcontractor to the

extent they apply to the scope of the sub-subcontractor's work. A copy of the City indemnity and insurance provisions will be furnished to the subcontractor upon request.

7. STANDARD OF PERFORMANCE

a. Consultant will perform the Services in the manner and according to the standards observed by a competent practitioner of the profession in which Consultant is engaged in the geographical area in which Consultant practices its profession and will prepare all work products required by this Agreement in accordance with such standards. Consultant will comply with federal, state and local laws and regulations applicable to performance of the Services, including but not limited to, the California Building Standards Code as in effect in the District, the Americans with Disabilities Act, any air pollution control laws and regulations applicable to Consultant, and any laws and regulations related to any copyright, patent, trademark or other intellectual property right involved in performance of the services. Consultant's Failure to comply with any law(s) or regulation(s) applicable to the performance of the services hereunder shall constitute a material breach of this agreement.

b. Consultant shall assign only competent personnel to perform services pursuant to this Agreement. In the event that District, in its sole discretion, at any time during the term of this Agreement, desires the reassignment of any such persons, Consultant shall, immediately upon receiving notice from District of such desire of District, reassign such person or persons.

8. OTHER GOVERNMENTAL REGULATIONS

To the extent that this Agreement may be funded by fiscal assistance from another governmental entity, Consultant and any subcontractors shall comply with all applicable rules and regulations to which District is bound by the terms of such fiscal assistance program.

9. USE OF RECYCLED PRODUCTS

Consultant shall endeavor to prepare and submit all reports, written studies, and other printed material on recycled paper to the extent it is available at equal or less cost than virgin paper.

10. INDEMNITY

To the maximum extent permitted by law, Consultant shall, at its own expense, indemnify, defend with counsel acceptable to the District, (which acceptance will not be unreasonably withheld), and hold harmless District and its officers, officials, employees, agents and volunteers ("Indemnitees") from and against any and all liability, loss, damage, claims, suits, actions, arbitration proceedings, administrative proceedings, regulatory proceedings, civil penalties and fines, expenses and costs (including, without limitation, claims expenses, attorney's fees and costs and fees of litigation) (collectively,

"Liability") of every nature, whether actual, alleged or threatened, arising out of or in connection with the Services or Consultant's failure to comply with any of the terms of this Agreement, regardless of any fault or alleged fault of the Indemnitees.

The Consultant's obligation to indemnify, defend and hold harmless under this provision shall not be excused because of the Consultant's inability to evaluate Liability, or because the Consultant evaluates Liability and determines that the Consultant is not or may not be liable. The Consultant must respond within 30 calendar days to any tender for defense and indemnity by the District, unless the time for responding is extended by an authorized representative of the District in writing. If the Consultant fails to accept tender of defense and indemnity within 30 calendar days, in addition to any other remedies authorized by law, so much of the money due or that may become due the Consultant under this Agreement as shall reasonably be considered necessary by the District, may be retained by the District until disposition has been made of the matter subject to tender, or until the Consultant accepts the tender, whichever occurs first.

The Consultant waives any and all rights to express or implied indemnity against the Indemnitees concerning any Liability of the Consultant arising out of or in connection with the Services or Consultant's failure to comply with any of the terms of this Agreement .

Notwithstanding the foregoing, to the extent this Agreement is a "construction contract" as defined by California Civil Code § 2783, as may be amended from time to time, Consultant's duty to indemnify under this provision shall not apply when to do so would be prohibited by California Civil Code § 2782, as may be amended from time to time.

Notwithstanding the foregoing, to the extent that the Services include design professional services subject to Cal. Civil Code § 2782.8, as amended from time to time, Consultant's duty to indemnify shall only be to the maximum extent permitted by Civil Code § 2782.8.

In the event that Consultant or any employee, agent, or subcontractor of Consultant providing services under this Agreement is determined by a court of competent jurisdiction or the California Public Employees Retirement System (PERS) to be eligible for enrollment in PERS as an employee of District, Consultant shall indemnify, defend, and hold harmless District for the payment of any employee and/or employer contributions for PERS benefits on behalf of Consultant or its employees, agents, or subcontractors, as well as for the payment of any penalties and interest on such contributions, which would otherwise be the responsibility of District.

The defense and indemnification obligations of this agreement are undertaken in addition to, and shall not in any way be limited by, the insurance obligations contained in this agreement.

Consultant/Subcontractor's responsibility for such defense and indemnity obligations shall survive the termination or completion of this Agreement for the full period of time allowed by law.

11. INSURANCE

a. Before commencing performance of the Services, Consultant, at its own cost and expense, must: a) procure "occurrence coverage" insurance of the kinds and in the amounts specified below against claims for injuries to persons or damages to property that may arise from or in connection with the performance of the Services hereunder by the Consultant or its agents, representatives, employees, or subcontractors; and b) submit to the District certificates of insurance and endorsements evidencing insurance coverage that meets the requirements of this section. Consultant must maintain the insurance policies required by this section throughout the Agreement term. The cost of such insurance must be included in the Consultant's proposal.

Consultant agrees to include with all subcontractors in their subcontract the same requirements and provisions of this Agreement including the indemnity and Insurance requirements to the extent they apply to the scope of the subcontractor's work. The Consultant shall require all subcontractors to provide a valid certificate of insurance and the required endorsements included in this Agreement prior to commencement of any work and Consultant will provide proof of compliance to the District.

Consultant may not allow any subcontractor to commence work on the Services until Consultant and/or the subcontractor have obtained all insurance required by this Agreement for the subcontractor(s) and submitted certificates of insurance and endorsements evidencing such coverage to District.

b. Workers Compensation Insurance. Consultant must, at its sole cost and expense, maintain Workers' Compensation Insurance and Employer's Liability Insurance for any and all persons employed directly or indirectly by Consultant. Workers' Compensation Insurance as required by the State of California, with coverage providing Statutory Limits, and Employer's Liability Insurance with limits of not less than ONE MILLION DOLLARS (\$1,000,000.00) per occurrence must be provided. The insurance must be endorsed to waive all rights of subrogation against District and its officials, officers, employees, and volunteers for loss arising from or related to the Services.

c. Consultant, at its own cost and expense, must maintain commercial general and automobile liability insurance for the term of this Agreement in an amount not less than ONE MILLION DOLLARS (\$1,000,000.00) per occurrence, TWO MILLION DOLLARS (\$2,000,000.00) aggregate, combined single limit coverage for risks associated with Services. If a Commercial General Liability Insurance or an Automobile Liability form or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to the Services or the general aggregate limit shall be at least twice the required occurrence limit. Such coverage shall include but shall not be limited to, protection against claims arising from bodily and personal injury, including death resulting therefrom, and damage to property resulting from activities

contemplated under this Agreement, including the use of owned and non-owned automobiles.

d. Except for Workers' Compensation insurance and Professional Liability insurance, all other insurance coverages required pursuant to this Agreement must include or be endorsed to include the following:

(1) District and its officials, officers, employees, agents, and volunteers ("Additional Insured") shall be covered as insureds with respect to each of the following: liability arising out of activities performed by or on behalf of Consultant, products and completed operations of Consultant; premises owned, occupied, or used by Consultant; and automobiles owned, leased, or used by Consultant. The coverage may contain no special limitations on the scope of protection afforded to District or its officials, officers, employees, agents, or volunteers.

(2) The Additional Insured coverage under the Consultant's policy shall be "primary and non-contributory" and Consultant's coverage will not seek contribution from the District's insurance or self-insurance and shall be at least as broad as CG 20 01 04 13.

e. It shall be a requirement under this Agreement that any available insurance proceeds broader than or in excess of the specified minimum insurance coverage requirements and/or limits shall be available to the Additional Insured. Furthermore, the requirements for coverage and limits shall be (1) the minimum coverage and limits specified in this Agreement; or (2) the broader coverage and maximum limits of coverage of any insurance policy or proceeds available to the named Insured; whichever is greater.

f. The limits of insurance required in this Agreement may be satisfied by a combination of primary and umbrella or excess insurance. Any umbrella or excess insurance shall contain or be endorsed to contain a provision that such coverage shall also apply on a primary and non-contributory basis for the benefit of District (if agreed to in a written contract or agreement) before the District's own insurance or self-insurance shall be called upon to protect it as a named insured.

g. Insurance coverage required pursuant to this Agreement must include or be endorsed to include the following:

(1) Any failure of Consultant to comply with reporting provisions of the policy shall not affect coverage provided to District and its officers, employees, agents, and volunteers.

(2) Required insurance coverage may not be suspended, voided, canceled, reduced in coverage or in limits, except after thirty (30) days' prior written notice by certified mail, return receipt requested, has been given to District.

h. Consultant, at its own cost and expense, must maintain for the period covered by this Agreement professional liability insurance in an amount not less than TWO MILLION DOLLARS (\$2,000,000) covering errors and omissions. Any deductible or self-insured retention under the required professional liability insurance may not exceed \$150,000 per claim.

i. All insurance required under this Agreement must be placed with insurers with a Best's rating of no less than A:VII unless otherwise approved by the District.

j. The District may approve a variation in the foregoing insurance requirements, upon a determination that the coverages, scope, limits, and forms of such insurance are either not commercially available, or that the District's interests are otherwise fully protected.

k. All self-insured retentions (SIR) must be disclosed to District for approval and shall not reduce the limits of liability. Policies containing any self-insured retention (SIR) provision shall provide or be endorsed to provide that the SIR may be satisfied by either the named Insured or the District. District reserves the right to obtain a full certified copy of any Insurance policy and endorsements. Failure to exercise this right shall not constitute a waiver of right to exercise later.

l. To the extent this Agreement is a "construction contract" as defined by California Civil Code § 2783, as may be amended from time to time, Consultant shall maintain insurance as required by this contract to the fullest amount allowed by law and shall maintain insurance for a minimum of five years following completion of the Services. In the event Consultant fails to obtain or maintain completed operations coverage as required by this Agreement, the District at its sole discretion may purchase the coverage required and the cost will be paid by Consultant.

12. NON DISCRIMINATION

During the performance of this Agreement, Consultant will not discriminate against any employee of the Consultant or applicant for employment because of race, religion, creed, color, national origin, sex, or age. Consultant will take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to their race, religion, creed, color, national origin, sex or age.

13 LICENSES & PERMITS

a. BUSINESS LICENSE

Before the District will issue a notice to proceed with the Services, Consultant and any subcontractors must acquire, at their expense, a business license from the City of Fort Bragg in accordance with Chapter 5.04 of the Fort Bragg Municipal Code. Such licenses must be kept valid throughout the Agreement term.

b. OTHER LICENSES AND PERMITS

Consultant represents and warrants to District that Consultant and its employees, agents, and any subcontractors have all licenses, permits, qualifications, and approvals of whatsoever nature that are legally required to practice their respective professions.

14. OWNERSHIP OF WORK PRODUCTS AND TREATMENT OF DOCUMENTS

All plans, specifications, reports, designs and other documents prepared by Consultant pursuant to this Agreement shall be and remain the property of the District. Any modification or reuse of such documents by the District without Consultant's prior written consent will be at the District's sole risk. Except as may be otherwise required by law, Consultant will disclose no data, plans, specifications, reports or other documents pertaining to the Services without the prior written consent of District.

15. TERMINATION AND REMEDIES

a. District may terminate this Agreement for convenience by giving at least 10 days written notice to Consultant specifying the termination effective date. Upon receipt of such notice, Consultant may continue performance of the Services through the date of termination. District shall pay Consultant for all Services actually performed in accordance with this Agreement through the termination effective date.

b. If Consultant materially breaches any term of this Agreement, in addition to any other remedies the District may have at law or equity, the District may:

(1) Terminate the Agreement by notice to the Consultant specifying the termination effective date;

(2) Retain, and/or recover from the Consultant at no additional cost to the District, the plans, specification, drawings, reports and other design documents and work products prepared by Consultant, whether or not completed;

(3) Complete the unfinished Services itself or have the unfinished Services completed, and/or;

(4) Charge Consultant, or deduct from monies that may be due or become due the Consultant under this Agreement, the difference between the cost of completing the unfinished Services pursuant to this Agreement and the amount that would otherwise be due Consultant had Consultant completed the Services in accordance with this Agreement.

16. BINDING EFFECT AND ASSIGNMENT PROHIBITION

This Agreement is binding upon District, Consultant, and their successors. Except as otherwise provided herein, neither District nor Consultant may assign, sublet or transfer

its interest in this Agreement or any part thereof without the prior written consent of the other, and any purported assignment without such consent will be void.

17. REPRESENTATIVES

a. District representative for purposes of this Agreement will be John Smith, Assistant Director of Public Works. Consultant representative for purposes of this Agreement will be Dane Hardin, Senior Marine Biologist. The parties' designated representatives will be the primary contact persons regarding the performance of the Services. The parties intend that their designated representatives will cooperate in all matters regarding this Agreement and in such manner so as to achieve performance of the Services in a timely and expeditious fashion.

b. Notices:

Any written notice to Consultant shall be sent to:

Dane Hardin
Senior Marine Biologist
Applied Marine Sciences
911 Center Street
Santa Cruz, CA 95060

Any written notice to District shall be sent to:

John Smith
Assistant Director of Public Works
Fort Bragg Municipal Improvement District
416 N. Franklin Street
Fort Bragg, California 95437

18. INTEGRATION AND AMENDMENT

This Agreement represents the entire and integrated agreement between District and Consultant and supersedes all prior negotiations, representations or agreements, whether written or oral. If a discrepancy, disagreement, ambiguity, inconsistency or difference in interpretation of terms arises as to terms or provisions of this Agreement and any Exhibit(s) attached to this Agreement, this Agreement shall control and shall be deemed to reflect the intent of the Parties with respect to the subject matter hereof. This Agreement may only be amended by a writing signed by a representative authorized to bind the Consultant and a representative authorized to bind the District.

19. CONFLICT OF INTEREST PROHIBITION

District and Consultant will comply with the requirements of the District's Conflict of Interest Code adopted pursuant to California Government Code §87300 et seq., the

Political Reform Act (California Government Code §81000 et seq.), the regulations promulgated by the Fair Political Practices Commission (Title 2, §18110 et seq. of the California Code of Regulations), California Government Code §1090 et seq., and any other ethics laws applicable to the performance of the Services and/or this Agreement. Consultant may be required to file with the District Clerk a completed Form 700 before commencing performance of the Services unless the District Clerk determines that completion of a Form 700 is not required, pursuant to District's Conflict of Interest Code. Form 700 forms are available from the District Clerk.

Consultant may not perform Services for any other person or entity that, pursuant to any applicable law or regulation, would result in a conflict of interest or would otherwise be prohibited with respect to Consultant's obligations pursuant to this Agreement. Consultant agrees to cooperate fully with District and to provide any necessary and appropriate information requested by District or any authorized representative concerning potential conflicts of interest or prohibitions concerning Consultant's obligations pursuant to this Agreement.

Consultant may not employ any District official, officer or employee in the performance of the Services, nor may any official, officer or employee of District have any financial interest in this Agreement that would violate California Government Code §1090 et seq. Consultant hereby warrants that it is not now, nor has it been in the previous twelve (12) months, an employee, agent, appointee, or official of District. If Consultant was an employee, agent, appointee, or official of District in the previous twelve months, Consultant warrants that it did not participate in any manner in the forming of this Agreement. Consultant understands that, if this Agreement is made in violation of Government Code §1090 et seq., the entire Agreement is void and Consultant will not be entitled to any compensation for Consultant's performance of the Services, including reimbursement of expenses, and Consultant will be required to reimburse District for any sums paid to Consultant under this Agreement. Consultant understands that, in addition to the foregoing, penalties for violating Government Code §1090 may include criminal prosecution and disqualification from holding public office in the State of California.

Any violation by Consultant of the requirements of this provision will constitute a material breach of this Agreement, and the District reserves all its rights and remedies at law and equity concerning any such violations.

20. APPLICABLE LAW AND VENUE

The laws of the State of California shall govern the rights, obligations, duties and liabilities of the parties to this Agreement and the interpretation of this Agreement. Any action or proceeding that is initiated or undertaken to enforce or interpret any provision, performance, obligation or covenant set forth in this Agreement shall be brought in a state court in Mendocino County.

21. RECOVERY OF ATTORNEYS' FEES

If a party to this Agreement brings any action, including an action for declaratory relief, to enforce or interpret any term of this Agreement, the prevailing party will be entitled to reasonable attorneys' fees in addition to any other relief to which that party may be entitled. The court may set such fees in the same action or in a separate action brought for that purpose.

22. SEVERABILITY

If a court of competent jurisdiction finds or rules that any provision of this Agreement is invalid, void, or unenforceable, the provisions of this Agreement not so adjudged will remain in full force and effect. The invalidity in whole or in part of any provision of this Agreement shall not void or affect the validity of any other provision of this Agreement.

23. COUNTERPARTS

This Agreement may be executed in multiple counterparts, each of which shall be an original and all of which together shall constitute one agreement.

IN WITNESS WHEREOF, the parties have caused their authorized representative to execute this Agreement on the date first written above.

DISTRICT

By: _____
Linda Ruffing
Its: District Manager

CONSULTANT

By: Dane Hardin
Dane Hardin
Its: Principal

ATTEST:

[Attach Notary Acknowledgment Page]

By: _____
June Lemos
District Clerk

APPROVED AS TO FORM:

By: _____
Samantha W. Zutler, District Counsel

Exhibit: Exhibit A – Consultant's Proposal

21. RECOVERY OF ATTORNEYS' FEES

If a party to this Agreement brings any action, including an action for declaratory relief, to enforce or interpret any term of this Agreement, the prevailing party will be entitled to reasonable attorneys' fees in addition to any other relief to which that party may be entitled. The court may set such fees in the same action or in a separate action brought for that purpose.

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If a court of competent jurisdiction finds or rules that any provision of this Agreement is invalid, void, or unenforceable, the provisions of this Agreement not so adjudged will remain in full force and effect. The invalidity in whole or in part of any provision of this Agreement shall not void or affect the validity of any other provision of this Agreement.

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IN WITNESS WHEREOF, the parties have caused their authorized representative to execute this Agreement on the date first written above.

DISTRICT

By: _____
Linda Ruffing
Its: District Manager

CONSULTANT

By: Dane Hardin
Dane Hardin
Its: Principal

ATTEST:

[Attach Notary Acknowledgment Page]

By: _____
June Lemos
District Clerk

APPROVED AS TO FORM:

By: Samantha W. Zutler
Samantha W. Zutler, District Counsel

Exhibit: Exhibit A – Consultant's Proposal



May 2, 2016

Revised June 15, 2016

Submitted to:

City of Fort Bragg
416 North Franklin St.
Fort Bragg, CA 95437

Submitted by:

A P P L I E D
inmarine
S C I E N C E S

911 Center Street
Santa Cruz, CA 95060

EXHIBIT A

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1. Background

The Monitoring and Reporting Program (MRP No. R1-2004-0009) for the Fort Bragg Municipal Improvement District No.1 (City of Fort Bragg) requires receiving water monitoring and inspection of the outfall from District's wastewater treatment facility. The primary objective of these activities is to document that the District's outfall is operating correctly and that the wastewater discharge is not impairing beneficial uses in the receiving water.

Protection of beneficial uses involves not only achievement of numerical objectives, but also documentation that narrative objectives are being met. For example, protection of the marine habitat beneficial use can be inferred through achievement of numerical water quality objectives, as well as through sampling to show whether biological communities in the vicinity of the discharge have been degraded. This proposal was developed to include elements that document the condition of flora and fauna on the seafloor in the vicinity of the outfall, and to provide a video record of the outfall condition.

2. Discharge and Monitoring History

In 1971, the District completed construction of a regional wastewater collection and treatment facility. At that time, wastewater was discharged through a 30-inch outfall that emptied into nearshore, shallow water. Following a thorough evaluation of outfall performance and biological communities in the vicinity of the outfall in 1973, the outfall was extended approximately 650 feet offshore in 1977. An average dry-weather flow of approximately 0.55 MGD currently is discharged through 14 diffuser ports spanning approximately 100 feet in 25–30 feet of water. Average wet-weather flow from January 1996 through December 2002 was approximately 1.3 MGD.

The 1973 evaluation of biological communities revealed decreased biological diversity within 75 feet of the outfall. Within this area, biological communities were dominated by the green alga, *Ulva lobata*. Infrared photography around the outfall also revealed depressed algal coverage within this area, which was attributed to outfall construction.

In December 2004, following negotiations between the City of Fort Bragg and the Water Board North Coast Region (Water Board) with technical assistance from Applied Marine Sciences, Inc. (AMS) the Water Board approved a monitoring plan. This plan was designed to document 1) compliance with California Ocean Plan receiving water objectives and 2) the integrity of the outfall structure, including the diffuser ports, at least once during each permit cycle to verify operational status of the outfall. Since 2004, monitoring has been conducted in 2007 and 2012.

3. Technical Approach

The technical approaches detailed below for assessing resident biota, and outfall condition are identical to those employed by AMS in conducting and the 2008 and 2012 NPDES receiving water monitoring program (Hardin and Dominik 2008, Johnson and Hardin 2013).

3.1. Outfall Inspection

3.1.1. Sampling Methods.

In conjunction with the biological sampling, divers will visually inspect the outfall structure, including the diffuser ports, to verify operational status of the outfall. The inspection will be documented with video.

3.1.2. Reporting

A report documenting outfall condition and maintenance, including original video footage and notations of any observed cracks, breaks, malfunctions, and recommended or performed repairs, will be submitted within 90 days following the inspection.

3.2. Biological Evaluation

3.2.1. Sampling Sites

Sampling will be conducted along five 30-meter transects arranged perpendicular to the outfall axis, with the beginning of each transect positioned over the outfall (Figure 1). Transects will be randomly located along the length of the diffuser section, using random numbers as meter distances between the inner and outer ends of the diffuser and alternating transects will extend in opposite directions from the diffuser.

3.2.2. Sampling Frequency

Sampling will be conducted once in the life of the permit.

3.2.3. Sampling Methods

At 1-meter intervals along each transect, the species under the transect line will be noted. These observations will provide data on percent cover of the flora and fauna around the outfall, which can be used to determine such community parameters as species richness and diversity and total abundance. All abalone within 0.5 meters of each transect will be counted and measured. These observations will provide data on the density and population structure of abalone around the outfall. A sediment sample will be collected near the diffuser at the beginning of each transect and at the outer end of each transect. These samples will provide data on the accumulation of organic material from the discharge around the outfall. Observations also will be recorded every meter along each transect of any objectionable aquatic growths, floating particulates or grease and oil, aesthetically undesirable discoloration of the ocean, color of fish or shellfish, and any evidence of degradation of indigenous biota attributable to the rate of deposition of inert solids, settleable material or nutrient materials.

3.2.4. Analyses Performed

Transect data will be analyzed according to transect segments, with those sampling points occurring within 15 meters of the diffuser being compared to those occurring greater than 15 meters from the diffuser. Each 15-meter segment will represent a replicate sample, providing 5 replicates each for the near-diffuser samples and far-diffuser samples (Figure 2). The proportion of sampling points in each segment that fall over a given plant or animal species provides an estimate of the percentage of the substrate covered by that species. Sediment samples will be analyzed for Total Organic Carbon (TOC) to indicate whether organic material from the

discharge is accumulating on the bottom. Routine statistical tests (e.g., t-test or analysis of variance) will be performed to determine whether there are differences between near-diffuser and far-diffuser samples in the percent cover of each species, the numbers or sizes of abalone or the percentage of TOC in sediments and whether there have been changes in the biological communities since the previous sampling in 2007. Changes since 2007 in the near-diffuser samples, in the absence of changes in the far-diffuser samples, might suggest effects of the discharge.

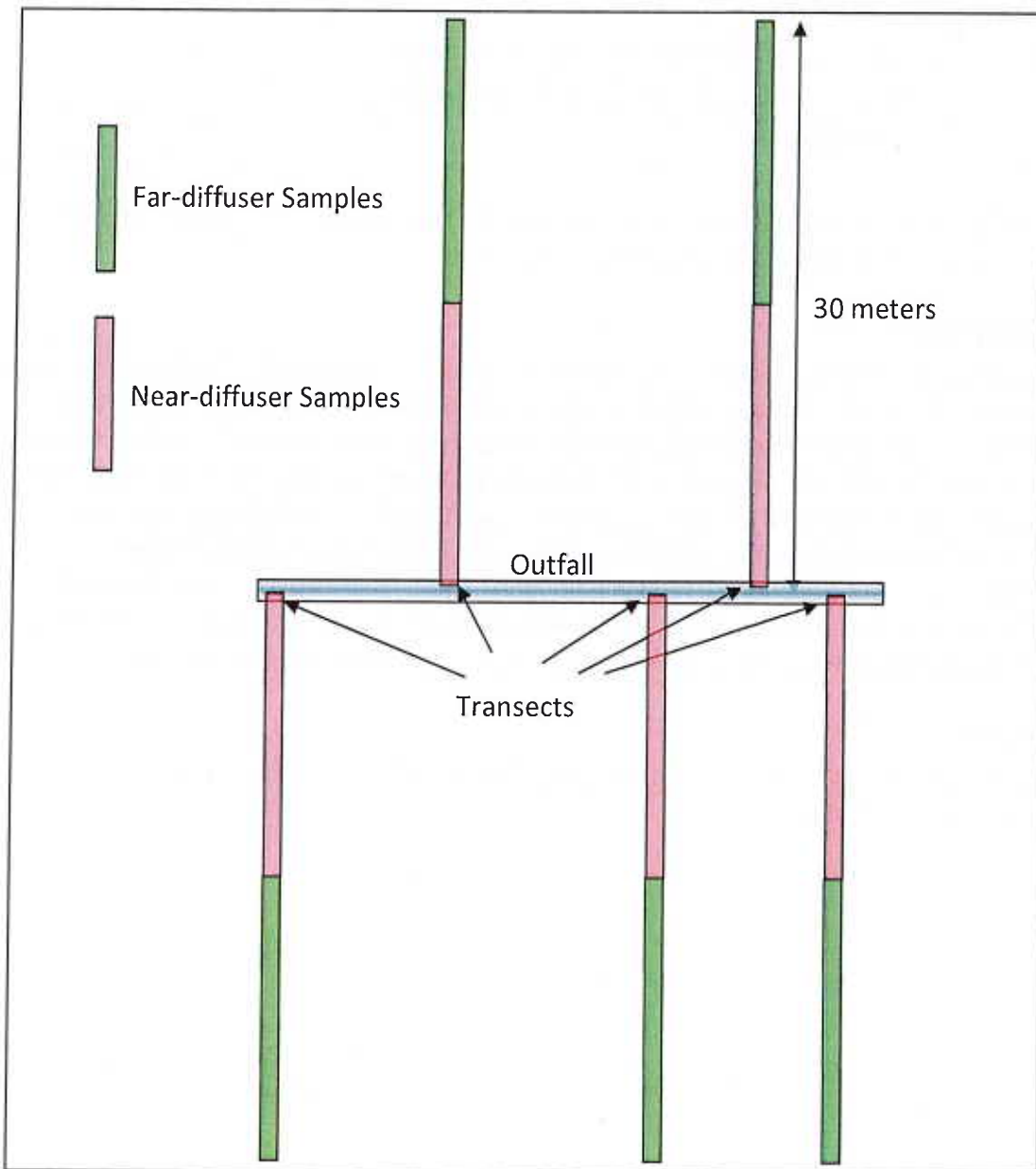


Figure 1. Layout of biological evaluation sampling transects.

3. Monitoring Schedule

Monitoring will be conducted during summer months before January 2014, at the City's convenience, to coincide with the season of maximum human visitation and utilization of beneficial uses. Three days will be scheduled for the monitoring, as shown in Table 1.

Table 1. Proposed Monitoring Schedule

Day	Activity
1	Mobilize gear and travel to Fort Bragg, set up gear
2	Conduct outfall inspection and biological sampling
3	Return home

Considerable logistical saving is achieved by conducting the biological monitoring and outfall inspection in the same field effort, as we have scheduled.

4. Reporting

A narrative report of the biological evaluation and outfall inspection will be submitted within 90 days following fieldwork. This report will include a description of all survey and analytical methods and results, including interpretation of any differences between the near-diffuser samples and the far-diffuser samples. It will be comparable in scope to the 2008 report to the water board prepared by AMS (Hardin and Dominik 2008) and will include appropriate statistical procedures to determine whether there have been changes in the biological communities that can be ascribed to the wastewater. The outfall inspection section of the report will document outfall condition and maintenance, including original video footage and notations of any observed cracks, breaks, malfunctions, and recommended repairs.

5. Budget

The cost estimate for all biological monitoring and analyses, the outfall inspection and all reporting is shown in Table 2.

Table 2. Cost estimate for implementation of biological monitoring and outfall inspection.

Cost Element	Unit	Rate	Item Cost
Labor			
Senior Scientist	hour	\$175.00	\$11,200
Associate Scientist	hour	\$120.00	\$11,520
Junior Scientist	hour	\$85.00	\$4,080
Editor	hour	\$85.00	\$340
Administrative Support	hour	\$75.00	\$700
Other Direct Costs			
Travel			
Mileage	mile	\$0.55	\$935
Lodging and per diem	day	\$190.00	\$990
Equipment and vessel rental	Day	various	\$2,150
Supplies	trip	\$200.00	\$200
G&A (applied to Other Direct Costs)	%	15%	\$641
Total			\$32,756

6. References Cited

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