# AGREEMENT BETWEEN THE COUNTY OF SAN MATEO AND CBEC ECO ENGINEERING

This Agreement is entered into this	day of	, 20	_, by and between the
County of San Mateo, a political subdi	ivision of the state o	f California, hereinaft	er called "County," and
cbec eco engineering, hereinafter call	ed "Contractor."		

\* \* \*

Whereas, pursuant to Section 31000 of the California Government Code, County may contract with independent contractors for the furnishing of such services to or for County or any Department thereof; and

Whereas, it is necessary and desirable that Contractor be retained for the purpose of providing engineering and other related professional and technical services required for the delivery of various types of capital improvement projects.

Now, therefore, it is agreed by the parties to this Agreement as follows:

#### 1. Exhibits and Attachments

The following exhibits and attachments are attached to this Agreement and incorporated into this Agreement by this reference:

Exhibit A—Services
Exhibit B—Payments and Rates
Attachment I—§ 504 Compliance
Attachment IP – Intellectual Property

#### 2. Services to be performed by Contractor

In consideration of the payments set forth in this Agreement and in Exhibit B, Contractor shall perform services for County in accordance with the terms, conditions, and specifications set forth in this Agreement and in Exhibit A.

#### 3. Payments

In consideration of the services provided by Contractor in accordance with all terms, conditions, and specifications set forth in this Agreement and in Exhibit A, County shall make payment to Contractor based on the rates and in the manner specified in Exhibit B. County reserves the right to withhold payment if County determines that the quantity or quality of the work performed is unacceptable. In no event shall County's total fiscal obligation under this Agreement exceed One Hundred Five Thousand, Five Hundred Forty-Six Dollars and no/100 (\$105,546.00). In the event that the County makes any advance payments, Contractor agrees to refund any amounts in excess of the amount owed by the County at the time of contract termination or expiration. Contractor is not entitled to payment for work not performed as required by this agreement.

#### 4. Term

Subject to compliance with all terms and conditions, the term of this Agreement shall be from December 13, 2016, through December 12, 2019.

#### 5. <u>Termination</u>

This Agreement may be terminated by Contractor or by the Director of Public Works (Director) or his designee at any time without a requirement of good cause upon thirty (30) days' advance written notice to the other party. Subject to availability of funding, Contractor shall be entitled to receive payment for work/services provided prior to termination of the Agreement. Such payment shall be that prorated portion of the full payment determined by comparing the work/services actually completed to the work/services required by the Agreement.

County may terminate this Agreement or a portion of the services referenced in the Attachments and Exhibits based upon the unavailability of Federal, State, or County funds by providing written notice to Contractor as soon as is reasonably possible after County learns of said unavailability of outside funding.

County may terminate this Agreement for cause. In order to terminate for cause, County must first give Contractor notice of the alleged breach. Contractor shall have five business days after receipt of such notice to respond and a total of ten calendar days after receipt of such notice to cure the alleged breach. If Contractor fails to cure the breach within this period, County may immediately terminate this Agreement without further action. The option available in this paragraph is separate from the ability to terminate without cause with appropriate notice described above. In the event that County provides notice of an alleged breach pursuant to this section, County may, in extreme circumstances, immediately suspend performance of services and payment under this Agreement pending the resolution of the process described in this paragraph. County has sole discretion to determine what constitutes an extreme circumstance for purposes of this paragraph, and County shall use reasonable judgment in making that determination.

#### 6. <u>Contract Materials</u>

At the end of this Agreement, or in the event of termination, all finished or unfinished documents, data, studies, maps, photographs, reports, and other written materials (collectively referred to as "contract materials") prepared by Contractor under this Agreement shall become the property of County and shall be promptly delivered to County. Upon termination, Contractor may make and retain a copy of such contract materials if permitted by law.

#### 7. Relationship of Parties

Contractor agrees and understands that the work/services performed under this Agreement are performed as an independent contractor and not as an employee of County and that neither Contractor nor its employees acquire any of the rights, privileges, powers, or advantages of County employees.

#### 8. <u>Hold Harmless</u>

#### a. General Hold Harmless

Contractor shall indemnify and save harmless County and its officers, agents, employees, and servants from all claims, suits, or actions of every name, kind, and description resulting from this Agreement, the performance of any work or services required of Contractor under this Agreement, or payments made pursuant to this Agreement brought for, or on account of, any of the following:

- (A) injuries to or death of any person, including Contractor or its employees/officers/agents;
- (B) damage to any property of any kind whatsoever and to whomsoever belonging;
- (C) any sanctions, penalties, or claims of damages resulting from Contractor's failure to comply, if applicable, with the requirements set forth in the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and all Federal regulations promulgated thereunder, as amended; or
- (D) any other loss or cost, including but not limited to that caused by the concurrent active or passive negligence of County and/or its officers, agents, employees, or servants. However, Contractor's duty to indemnify and save harmless under this Section shall not apply to injuries or damage for which County has been found in a court of competent jurisdiction to be solely liable by reason of its own negligence or willful misconduct.

The duty of Contractor to indemnify and save harmless as set forth by this Section shall include the duty to defend as set forth in Section 2778 of the California Civil Code.

#### b. Intellectual Property Indemnification

Contractor hereby certifies that it owns, controls, and/or licenses and retains all right, title, and/or interest in and to any intellectual property it uses in relation to this Agreement, including the design, look, feel, features, source code, content, and/or other technology relating to any part of the services it provides under this Agreement and including all related patents, inventions, trademarks, and copyrights, all applications therefor, and all trade names, service marks, know how, and trade secrets (collectively referred to as "IP Rights") except as otherwise noted by this Agreement.

Contractor warrants that the services it provides under this Agreement do not infringe, violate, trespass, or constitute the unauthorized use or misappropriation of any IP Rights of any third party. Contractor shall defend, indemnify, and hold harmless County from and against all liabilities, costs, damages, losses, and expenses (including reasonable attorney fees) arising out of or related to any claim by a third party that the services provided under this Agreement infringe or violate any third-party's IP Rights provided any such right is enforceable in the United States. Contractor's duty to defend, indemnify, and hold harmless under this Section applies only provided that: (a) County notifies Contractor promptly in writing of any notice of any such third-party claim; (b) County cooperates with Contractor, at Contractor's expense, in all reasonable respects in connection with the investigation and defense of any such thirdparty claim; (c) Contractor retains sole control of the defense of any action on any such claim and all negotiations for its settlement or compromise (provided Contractor shall not have the right to settle any criminal action, suit, or proceeding without County's prior written consent, not to be unreasonably withheld, and provided further that any settlement permitted under this Section shall not impose any financial or other obligation on County, impair any right of County, or contain any stipulation, admission, or acknowledgement of wrongdoing on the part of County without County's prior written consent, not to be unreasonably withheld); and (d) should services under this Agreement become, or in Contractor's opinion be likely to become, the subject of such a claim, or in the event such a third party claim or threatened claim causes County's reasonable use of the services under this Agreement to be seriously endangered or disrupted, Contractor shall, at Contractor's option and expense, either: (i) procure for County the right to continue using the services without infringement or (ii) replace or modify the services so that they become non-infringing but remain functionally equivalent.

Notwithstanding anything in this Section to the contrary, Contractor will have no obligation or liability to County under this Section to the extent any otherwise covered claim is based upon: (a) any aspects of the services under this Agreement which have been modified by or for County (other than modification

performed by, or at the direction of, Contractor) in such a way as to cause the alleged infringement at issue; and/or (b) any aspects of the services under this Agreement which have been used by County in a manner prohibited by this Agreement.

The duty of Contractor to indemnify and save harmless as set forth by this Section shall include the duty to defend as set forth in Section 2778 of the California Civil Code.

#### 9. Assignability and Subcontracting

Contractor shall not assign this Agreement or any portion of it to a third party or subcontract with a third party to provide services required by Contractor under this Agreement without the prior written consent of County. Any such assignment or subcontract without County's prior written consent shall give County the right to automatically and immediately terminate this Agreement without penalty or advance notice.

#### 10. Insurance

#### a. General Requirements

Contractor shall not commence work or be required to commence work under this Agreement unless and until all insurance required under this Section has been obtained and such insurance has been approved by County's Risk Management, and Contractor shall use diligence to obtain such insurance and to obtain such approval. Contractor shall furnish County with certificates of insurance evidencing the required coverage, and there shall be a specific contractual liability endorsement extending Contractor's coverage to include the contractual liability assumed by Contractor pursuant to this Agreement. These certificates shall specify or be endorsed to provide that thirty (30) days' notice must be given, in writing, to County of any pending change in the limits of liability or of any cancellation or modification of the policy.

#### b. Workers' Compensation and Employer's Liability Insurance

Contractor shall have in effect during the entire term of this Agreement workers' compensation and employer's liability insurance providing full statutory coverage. In signing this Agreement, Contractor certifies, as required by Section 1861 of the California Labor Code, that (a) it is aware of the provisions of Section 3700 of the California Labor Code, which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of the Labor Code, and (b) it will comply with such provisions before commencing the performance of work under this Agreement.

#### c. Liability Insurance

Contractor shall take out and maintain during the term of this Agreement such bodily injury liability and property damage liability insurance as shall protect Contractor and all of its employees/officers/agents while performing work covered by this Agreement from any and all claims for damages for bodily injury, including accidental death, as well as any and all claims for property damage which may arise from Contractor's operations under this Agreement, whether such operations be by Contractor, any subcontractor, anyone directly or indirectly employed by either of them, or an agent of either of them. Such insurance shall be combined single limit bodily injury and property damage for each occurrence and shall not be less than the amounts specified below:

(a) Comprehensive General Liability... \$1,000,000

(b) Motor Vehicle Liability Insurance... \$1,000,000

(c) Professional Liability...... \$1,000,000

County and its officers, agents, employees, and servants shall be named as additional insured on any such policies of insurance, which shall also contain a provision that (a) the insurance afforded thereby to County and its officers, agents, employees, and servants shall be primary insurance to the full limits of liability of the policy and (b) if the County or its officers, agents, employees, and servants have other insurance against the loss covered by such a policy, such other insurance shall be excess insurance only.

In the event of the breach of any provision of this Section, or in the event any notice is received which indicates any required insurance coverage will be diminished or canceled, County, at its option, may, notwithstanding any other provision of this Agreement to the contrary, immediately declare a material breach of this Agreement and suspend all further work and payment pursuant to this Agreement.

#### 11. Compliance With Laws

All services to be performed by Contractor pursuant to this Agreement shall be performed in accordance with all applicable Federal, State, County, and municipal laws, ordinances, and regulations, including but not limited to the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and the Federal Regulations promulgated thereunder, as amended (if applicable), the Business Associate requirements set forth in Attachment H (if attached), the Americans with Disabilities Act of 1990, as amended, and Section 504 of the Rehabilitation Act of 1973, which prohibits discrimination on the basis of disability in programs and activities receiving any Federal or County financial assistance. Such services shall also be performed in accordance with all applicable ordinances and regulations, including but not limited to appropriate licensure, certification regulations, provisions pertaining to confidentiality of records, and applicable quality assurance regulations. In the event of a conflict between the terms of this Agreement and any applicable State, Federal, County, or municipal law or regulation, the requirements of the applicable law or regulation will take precedence over the requirements set forth in this Agreement.

Contractor will timely and accurately complete, sign, and submit all necessary documentation of compliance.

#### 12. <u>Non-Discrimination and Other Requirements</u>

#### a. General Non-discrimination

No person shall be denied any services provided pursuant to this Agreement (except as limited by the scope of services) on the grounds of race, color, national origin, ancestry, age, disability (physical or mental), sex, sexual orientation, gender identity, marital or domestic partner status, religion, political beliefs or affiliation, familial or parental status (including pregnancy), medical condition (cancer-related), military service, or genetic information.

#### b. **Equal Employment Opportunity**

Contractor shall ensure equal employment opportunity based on objective standards of recruitment, classification, selection, promotion, compensation, performance evaluation, and management relations for all employees under this Agreement. Contractor's equal employment policies shall be made available to County upon request.

#### c. Section 504 of the Rehabilitation Act of 1973

Contractor shall comply with Section 504 of the Rehabilitation Act of 1973, as amended, which provides that no otherwise qualified individual with a disability shall, solely by reason of a disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination in the performance of any services this Agreement. This Section applies only to contractors who are providing services to members of the public under this Agreement.

#### d. Compliance with County's Equal Benefits Ordinance

Contractor shall comply with all laws relating to the provision of benefits to its employees and their spouses or domestic partners, including, but not limited to, such laws prohibiting discrimination in the provision of such benefits on the basis that the spouse or domestic partner of the Contractor's employee is of the same or opposite sex as the employee.

#### e. Discrimination Against Individuals with Disabilities

The nondiscrimination requirements of 41 C.F.R. 60-741.5(a) are incorporated into this Agreement as if fully set forth here, and Contractor and any subcontractor shall abide by the requirements of 41 C.F.R. 60–741.5(a). This regulation prohibits discrimination against qualified individuals on the basis of disability and requires affirmative action by covered prime contractors and subcontractors to employ and advance in employment qualified individuals with disabilities.

#### f. History of Discrimination

Contractor certifies that no finding of discrimination has been issued in the past 365 days against Contractor by the Equal Employment Opportunity Commission, the California Department of Fair Employment and Housing, or any other investigative entity. If any finding(s) of discrimination have been issued against Contractor within the past 365 days by the Equal Employment Opportunity Commission, the California Department of Fair Employment and Housing, or other investigative entity, Contractor shall provide County with a written explanation of the outcome(s) or remedy for the discrimination prior to execution of this Agreement. Failure to comply with this Section shall constitute a material breach of this Agreement and subjects the Agreement to immediate termination at the sole option of the County.

#### g. Reporting; Violation of Non-discrimination Provisions

Contractor shall report to the County Manager the filing in any court or with any administrative agency of any complaint or allegation of discrimination on any of the bases prohibited by this Section of the Agreement or the Section titled "Compliance with Laws". Such duty shall include reporting of the filing of any and all charges with the Equal Employment Opportunity Commission, the California Department of Fair Employment and Housing, or any other entity charged with the investigation or adjudication of allegations covered by this subsection within 30 days of such filing, provided that within such 30 days such entity has not notified Contractor that such charges are dismissed or otherwise unfounded. Such notification shall include a general description of the circumstances involved and a general description of the kind of discrimination alleged (for example, gender-, sexual orientation-, religion-, or race-based discrimination).

Violation of the non-discrimination provisions of this Agreement shall be considered a breach of this Agreement and subject the Contractor to penalties, to be determined by the County Manager, including but not limited to the following:

- i. termination of this Agreement;
- ii. disqualification of the Contractor from being considered for or being awarded a County contract for a period of up to 3 years;
- iii. liquidated damages of \$2,500 per violation; and/or
- iv. imposition of other appropriate contractual and civil remedies and sanctions, as determined by the County Manager.

To effectuate the provisions of this Section, the County Manager shall have the authority to offset all or any portion of the amount described in this Section against amounts due to Contractor under this Agreement or any other agreement between Contractor and County.

#### h. Compliance with Living Wage Ordinance

As required by Chapter 2.88 of the San Mateo County Ordinance Code, Contractor certifies all contractor(s) and subcontractor(s) obligated under this contract shall fully comply with the provisions of the County of San Mateo Living Wage Ordinance, including, but not limited to, paying all Covered Employees the current Living Wage and providing notice to all Covered Employees and Subcontractors as required under the Ordinance.

#### 13. Compliance with County Employee Jury Service Ordinance

Contractor shall comply with Chapter 2.85 of the County's Ordinance Code, which states that Contractor shall have and adhere to a written policy providing that its employees, to the extent they are full-time employees and live in San Mateo County, shall receive from the Contractor, on an annual basis, no fewer than five days of regular pay for jury service in San Mateo County, with jury pay being provided only for each day of actual jury service. The policy may provide that such employees deposit any fees received for such jury service with Contractor or that the Contractor may deduct from an employee's regular pay the fees received for jury service in San Mateo County. By signing this Agreement, Contractor certifies that it has and adheres to a policy consistent with Chapter 2.85. For purposes of this Section, if Contractor has no employees in San Mateo County, it is sufficient for Contractor to provide the following written statement to County: "For purposes of San Mateo County's jury service ordinance, Contractor certifies that it has no full-time employees who live in San Mateo County. To the extent that it hires any such employees during the term of its Agreement with San Mateo County, Contractor shall adopt a policy that complies with Chapter 2.85 of the County's Ordinance Code." The requirements of Chapter 2.85 do not apply if this Agreement's total value listed in the Section titled "Payments", is less than one-hundred thousand dollars (\$100,000), but Contractor acknowledges that Chapter 2.85's requirements will apply if this Agreement is amended such that its total value meets or exceeds that threshold amount.

#### 14. Retention of Records; Right to Monitor and Audit

- (a) Contractor shall maintain all required records relating to services provided under this Agreement for three (3) years after County makes final payment and all other pending matters are closed, and Contractor shall be subject to the examination and/or audit by County, a Federal grantor agency, and the State of California.
- (b) Contractor shall comply with all program and fiscal reporting requirements set forth by applicable Federal, State, and local agencies and as required by County.

(c) Contractor agrees upon reasonable notice to provide to County, to any Federal or State department having monitoring or review authority, to County's authorized representative, and/or to any of their respective audit agencies access to and the right to examine all records and documents necessary to determine compliance with relevant Federal, State, and local statutes, rules, and regulations, to determine compliance with this Agreement, and to evaluate the quality, appropriateness, and timeliness of services performed.

#### 15. Merger Clause; Amendments

This Agreement, including the Exhibits and Attachments attached to this Agreement and incorporated by reference, constitutes the sole Agreement of the parties to this Agreement and correctly states the rights, duties, and obligations of each party as of this document's date. In the event that any term, condition, provision, requirement, or specification set forth in the body of this Agreement conflicts with or is inconsistent with any term, condition, provision, requirement, or specification in any Exhibit and/or Attachment to this Agreement, the provisions of the body of the Agreement shall prevail. Any prior agreement, promises, negotiations, or representations between the parties not expressly stated in this document are not binding. All subsequent modifications or amendments shall be in writing and signed by the parties.

#### 16. Controlling Law; Venue

The validity of this Agreement and of its terms, the rights and duties of the parties under this Agreement, the interpretation of this Agreement, the performance of this Agreement, and any other dispute of any nature arising out of this Agreement shall be governed by the laws of the State of California without regard to its choice of law or conflict of law rules. Any dispute arising out of this Agreement shall be venued either in the San Mateo County Superior Court or in the United States District Court for the Northern District of California.

#### 17. Notices

Any notice, request, demand, or other communication required or permitted under this Agreement shall be deemed to be properly given when both: (1) transmitted via facsimile to the telephone number listed below or transmitted via email to the email address listed below; and (2) sent to the physical address listed below by either being deposited in the United States mail, postage prepaid, or deposited for overnight delivery, charges prepaid, with an established overnight courier that provides a tracking number showing confirmation of receipt.

In the case of County, to:

Name/Title: James C. Porter, Director of Public Works

Address: 555 County Center, 5th Floor, Redwood City, CA 94063

Telephone: (650) 363-4100
Facsimile: (650) 361-8220
Email: jporter@smcgov.org

In the case of Contractor, to:

Name/Title: Chris Hammersmark, Director

Address: 519 Seabright Ave, Suite 102, Santa Cruz, CA 95062

Telephone: (916) 668-5236 Facsimile: (916) 669-8886

Email: c.hammersmark@cbecoeng.com

#### 18. <u>Electronic Signature</u>

Both County and Contractor wish to permit this Agreement and future documents relating to this Agreement to be digitally signed in accordance with California law and County's Electronic Signature Administrative Memo. Any party to this Agreement may revoke such agreement to permit electronic signatures at any time in relation to all future documents by providing notice pursuant to this Agreement.

\* \* \*

For Contractor: cbec eco engineering 12/2/2016 CHRIS COUNTY OF SAN MATEO By: President, Board of Supervisors, San Mateo County Date: ATTEST: By: Clerk of Said Board

In witness of and in agreement with this Agreement's terms, the parties, by their duly authorized

representatives, affix their respective signatures:

# Exhibit A In consideration of the payments set forth in Exhibit B, Contractor shall provide the following services:

# Exhibit A



Hydrology | Hydraulics | Geomorphology | Design | Field Services

Date:	November 29, 2016			
To:	Matthew Ruble, San Mateo County Department of Public Works			
From:	om: Chris Hammersmark, cbec eco engineering			
Proposal:	Proposal: 16-51 - Butano Creek 2D Model Development and Climate Change Modeling			
Subject:	Scope of Work and Budget Estimate			

#### Introduction

At the request of Matthew Ruble of San Mateo County Department of Public Works (County) cbec eco engineering (cbec) has developed a scope of work and budget estimate to develop a two-dimensional (2D) hydraulic and sediment transport model of the lower reaches of Butano Creek, Pescadero Creek and the Pescadero Marsh and Lagoon. The model will be used immediately to support the Butano Creek Bridge Feasibility Study (under a separate contract) as well as evaluating changes to system dynamics related to future climate change scenarios (under this contract). The model may also be used in the future to analyze possible fish passage solutions for Butano Creek, potential restoration/management projects, and effects of relocating the fire station.

## Task 1 - Develop 2D Hydraulic and Sediment Transport Model

cbec will develop a 2D hydraulic and sediment transport model of the project area. The model will extend from the Pacific Ocean upstream to Cloverdale Rd on Butano Creek and approximately 4 miles upstream of the lagoon on Pescadero Creek. The model development will rely heavily upon the analyses, data and assumptions used in the development of the 1D model used in the Flooding Solutions Project. cbec plans to develop the model using the MIKE21C software platform developed by the Danish Hydraulics Institute, which is able to simulate multiple grain sizes and hydraulic structures (e.g. bridges). Mesh cell sizes will vary from relatively small within channels (e.g., ~3-6 ft) to larger in expansive off-channel areas (e.g., ~25 ft).

#### **Assumptions:**

- For reaches without detailed 3D survey data available, channel surfaces will be developed by interpolating the best available cross section data.
- New bathymetry data for the lagoon collected by UC Berkeley will be incorporated, if possible.
- New bathymetry data for the marsh and lagoon collected by cbec under a separate contract will be incorporated.
- New topographic data for Pescadero Creek (see Task 2) will be incorporated.
- Existing LiDAR datasets (e.g. NOAA 2010, SMC 2005) for floodplain areas, will be utilized, without extensive verification of these data.

Butano Creek 2D Model Development and Climate Change Modeling Scope of Work and Budget Estimate

- Sediment load data provided previously by the Water Board as part of the TMDL analysis will be used, consistent with the Flooding Solutions modeling effort.
- The Pescadero Creek Road bridge over Butano Creek will be included, however other bridges (e.g. Stage Road over Pescadero Creek, etc.) will not be included at this time.
- We do not plan to include tributaries to Pescadero Creek other than Butano Creek in the model (e.g., Bradley Creek).

#### **Deliverables:**

Hydraulic and sediment transport model files.

## **Task 2 - Topographic Survey**

cbec will conduct limited cross section topographic surveys along Pescadero Creek within the proposed model domain. Survey data will be combined with LiDAR data (as appropriate) to develop complete cross sections as needed. Budget has been allocated for two (2) field days for a crew of two (2). A combination of RTK GPS equipment and a total station to conduct the topographic survey.

#### **Deliverables:**

- Map of proposed cross section locations provided to the County prior to undertaking the survey effort.
- Topographic data provided in PNEZD format in a GIS shapefile.

## Task 3 - Analysis of Future Hydrology and Sea Level Rise

cbec will develop future stream flows for Pescadero Creek and Butano Creek to be used as inputs for the climate change modeling conducted in Task 4. In order to develop future stream flow projections downscaled daily precipitation predictions from the World Climate Research Programme CMIP3 or CMIP5 will be used. Future stream flows will likely be developed by running precipitation predictions through a hydrologic routing model (e.g. HEC-HMS, WinTR-55, VIC) of the watershed. It is possible that it may be necessary to take a different approach and scale current streamflow magnitudes by the ratio of future to current precipitation amounts. Future sea level elevation standards/requirements will be discussed with the County. If none are provided, cbec proposes to use the values provided by the National Research Council 2012 report regarding sea level rise. A 2060 planning horizon will be used.

#### **Assumptions:**

 We plan to use downscaled daily precipitation projections provided by CMIP3 or CMIP5 unless other precipitation projections are made available during the appropriate timeline for the completion of this task.

#### **Deliverables:**

Methods and results will be documented in the technical memorandum described in Task 5.

# **Task 4 - Coastal Confluence Climate Change Modeling**

#### Butano Creek 2D Model Development and Climate Change Modeling Scope of Work and Budget Estimate

cbec will utilize the model developed in Task 1 and boundary conditions developed in Task 3 to simulate various climate change scenarios, including sea level rise and future watershed hydrology. cbec will simulate two (2) sea level rise conditions (low and high estimates) and three (3) hydrologic conditions based upon a 2060 planning horizon. The hydrologic conditions assessed will include 25-yr, 50-yr and 100-yr events, assuming average emissions projections. Two (2) sea level rise conditions and three (3) hydrologic conditions combine to yield six (6) scenarios to be modeled.

#### **Assumptions:**

• It has been assumed that 6 scenarios will be modeled and post-processed.

#### **Deliverables:**

 Modeling results will be documented in the Climate Change Effects Technical Memorandum described in Task 5.

#### Task 5 - Reporting

cbec will develop a brief technical memorandum that documents the methods used in the development of the 2D hydraulic and sediment transport model. The technical memorandum will include information regarding the topographic datasets, hydraulic and sediment boundary condition development, hydraulic roughness assumptions, and existing conditions results. cbec will also develop a brief technical memorandum that summarizes the results of the climate change scenarios that were simulated in Task 4.

#### **Deliverables:**

- Draft outline of the Model Technical Memorandum (MS word)
- Draft outline of the Climate Change Effects Technical Memorandum (MS word)
- Draft Model Technical Memorandum (MS word and PDF)
- Final Model Assessment Technical Memorandum (PDF)
- Draft Climate Change Effects Technical Memorandum (MS Word and PDF)
- Final Climate Change Effects Technical Memorandum (PDF)
- GIS shapefiles of extent and depth of inundation for each of the scenarios simulated

#### **Assumptions:**

• We will respond to one set of combined comments to the draft technical memoranda when producing the final drafts.

#### **Task 6 - Project Management**

cbec will provide monthly invoices and progress reports as needed. cbec will attend two (2) in-person meetings and participate in two (2) conference calls: One (1) kick-off in-person meeting, one (1) meeting to discuss changes/modifications/updates and modeling approach, one (1) meeting to discuss preliminary findings, one (1) meeting to get feedback on final technical memoranda & incorporate comments (to be determined which of these meetings will be in-person). Budget has also been provided to set-up the contract and for communication between the County and cbec staff.

#### **Deliverables:**

Monthly invoices and progress reports per the template provided by the County.

# Exhibit A

Butano Creek 2D Model Development and Climate Change Modeling Scope of Work and Budget Estimate

### **Assumptions:**

• Meetings have been assumed to be 3 hours in duration, with 2 hours of travel allocated for the in-person meetings.

# **Proposed Budget**

cbec proposes to perform these services on a time and materials basis. The estimated cost to perform the proposed scope of work is \$105,546, as shown by the attached budget estimate.

# Exhibit A



Hydraulics | Hydrology | Geomorphology | Design

#### **ESTIMATED PROJECT BUDGET SUMMARY**

Butano Creek 2D Model Development and Climate Change Modeling cbec Proposal # 16-51

Task #	Task Description		Subtotal
1	Develop Model	\$	46,540.00
2	Topographic Survey	\$	7,560.00
3	Analysis of Future Hydrology	\$	13,280.00
4	Climate Change Simulations	\$	19,620.00
5	Reporting	\$	7,700.00
6	Project Management	\$	6,380.00
		Labor Fee \$	101,080.00
		Reimbursables \$	4,465.74
		Subconsultant(s) \$	-
		Total Project Budget \$	105,545.74

# Exhibit B

In consideration of the services provided by Contractor described in Exhibit A and subject to the terms of the Agreement, County shall pay Contractor based on the following fee schedule and terms:

# Exhibit B



Hydraulics | Hydrology | Geomorphology | Design

#### **ESTIMATED LABOR FEES**

# Butano Creek 2D Model Development and Climate Change Modeling cbec Proposal # 16-51

Unless expressly provided within the contract, rates are subject to increase annually on January 1 of each year.

Task #	Director	Senior Eco-Engineer II Senior Eco-Hydrologist II	Senior Eco-Engineer I Senior Eco-Hydrologist I	Eco-Engineer II Eco-Hydrologist II	Eco-Engineer I Eco-Hydrologist I	Subtotal Labor Hours Per Task		Subtotal Labor Fee Per Task
	\$200	\$195	\$160	\$145	\$130			
1	20		60	12	240	332	\$	46,540.00
2	4				52	56	\$	7,560.00
3	8		8		80	96	\$	13,280.00
4	9		9		126	144	\$	19,620.00
5	4		9		42	55	\$	7,700.00
6	28				6	34	\$	6,380.00
	73	0	86	12	546	717	\$	101,080.00

# Exhibit B



Hydraulics | Hydrology | Geomorphology | Design

#### **ESTIMATED REIMBURSABLE EXPENSES**

# Butano Creek 2D Model Development and Climate Change Modeling cbec Proposal # 16-51

Item Description	Quantity	<b>Unit Cost</b>	Item Cost
Mileage	361 miles	0.54 /mile	\$ 194.94
Parking	trip	/trip	\$ -
Lodging	day(s)	/day	\$ -
Per Diem	day(s)	/day	\$ -
Airfare	day(s)	/day	\$ -
Car Rental	2 day(s)	100.00 /day	\$ 200.00
ATV	day(s)	150.00 /day	\$ -
Canoe	day(s)	30.00 /day	\$ -
Utility Boat	day(s)	200.00 /day	\$ -
Jet Boat	day(s)	350.00 /day	\$ -
Soil Sampler	day(s)	20.00 /day	\$ -
Soil Samples	unit(s)	150.00 /unit	\$ -
Total Station	2 day(s)	225.00 /day	\$ 450.00
RTK GPS	2 day(s)	375.00 /day	\$ 750.00
Leveloggers	month(s)	/month	\$ -
Miscellaneous Field Supplies	1 LS	40.00 LS	\$ 40.00
Software Fees	1 year(s)	2,500.00 /year	\$ 2,500.00
Copying / Production			\$ -
Courier / Delivery			\$ -
Archiving / Documentation			\$ -
	Si	ubtotal Reimbursables	\$ 4,134.94
Administrative Charge (8%)			\$ 330.80
		<b>Total Reimbursables</b>	\$ 4,465.74

#### ATTACHMENT I

#### Assurance of Compliance with Section 504 of the Rehabilitation Act of 1973, as Amended

The undersigned (hereinafter called "Contractor(s)") hereby agrees that it will comply with Section 504 of the Rehabilitation Act of 1973, as amended, all requirements imposed by the applicable DHHS regulation, and all guidelines and interpretations issued pursuant thereto.

The Contractor(s) gives/give this assurance in consideration of for the purpose of obtaining contracts after the date of this assurance. The Contractor(s) recognizes/recognize and agrees/agree that contracts will be extended in reliance on the representations and agreements made in this assurance. This assurance is binding on the Contractor(s), its successors, transferees, and assignees, and the person or persons whose signatures appear below are authorized to sign this assurance on behalf of the Contractor(s).

The	The Contractor(s): (Check a or b)  a. Employs fewer than 15 persons.						
	b. Employs 15 or more persons and, pursuant to section 84.7 (a) of the regulation (45 C.F.R. 84.7 (a), has designated the following person(s) to coordinate its efforts to comply with the DHHS regulation.						
	Name of 504 Person:	ALEXIS WESSELS					
	Name of Contractor(s):	cbec, inc					
	Street Address or P.O. Box:	2544 MOUSTRIAL BLVD.					
	City, State, Zip Code:	WEST SACRAMENTO CA 95691					
l cei	I certify that the above information is complete and correct to the best of my knowledge						
	Signature:	C74-Z-					
	Title of Authorized Official:	DIRECTOR					
	Date:	12/7/2016					

<sup>\*</sup>Exception: DHHS regulations state that: "If a recipient with fewer than 15 employees finds that, after consultation with a disabled person seeking its services, there is no method of complying with (the facility accessibility regulations) other than making a significant alteration in its existing facilities, the recipient may, as an alternative, refer the handicapped person to other providers of those services that are accessible."

# Attachment IP Intellectual Property Rights

- 1. The County of San Mateo ("County"), shall and does own all titles, rights and interests in all Work Products created by Contractor and its subcontractors (collectively "Vendors") for the County under this Agreement. Contractor may not sell, transfer, or permit the use of any Work Products without the express written consent of the County.
- "Work Products" are defined as all materials, tangible or not, created in whatever medium pursuant to this Agreement, including without limitation publications, promotional or educational materials, reports, manuals, specifications, drawings and sketches, computer programs, software and databases, schematics, marks, logos, graphic designs, notes, matters and combinations thereof, and all forms of intellectual property.
- 3. Contractor shall not dispute or contest, directly or indirectly, the County's exclusive right and title to the Work Products nor the validity of the intellectual property embodied therein. Contractor hereby assigns, and if later required by the County, shall assign to the County all titles, rights and interests in all Work Products. Contractor shall cooperate and cause subcontractors to cooperate in perfecting County's titles, rights or interests in any Work Product, including prompt execution of documents as presented by the County.
- 4. To the extent any of the Work Products may be protected by U.S. Copyright laws, Parties agree that the County commissions Vendors to create the copyrightable Work Products, which are intended to be work-made-for-hire for the sole benefit of the County and the copyright of which is vested in the County.
- 5. In the event that the title, rights, and/or interests in any Work Products are deemed not to be "work-made-for-hire" or not owned by the County, Contractor hereby assigns and shall require all persons performing work pursuant to this Agreement, including its subcontractors, to assign to the County all titles, rights, interests, and/or copyrights in such Work Product. Should such assignment and/or transfer become necessary or if at any time the County requests cooperation of Contractor to perfect the County's titles, rights or interests in any Work Product, Contractor agrees to promptly execute and to obtain execution of any documents (including assignments) required to perfect the titles, rights, and interests of the County in the Work Products with no additional charges to the County beyond that identified in this Agreement or subsequent change orders. The County, however, shall pay all filing fees required for the assignment, transfer, recording, and/or application.
- 6. Contractor agrees that before commencement of any subcontract work it will incorporate this <u>ATTACHMENT IP</u> to contractually bind or otherwise oblige its subcontractors and personnel performing work under this Agreement such that the County's titles, rights, and interests in Work Products are preserved and protected as intended herein.