

**AMENDMENT NO. 3 TO AGREEMENT BETWEEN
SAN DIEGO UNIFIED PORT DISTRICT
and
GREAT ECOLOGY & ENVIRONMENTS, INC.
for
MITIGATION BANK CONSULTING SERVICES
FOR THE POND 20 SITE, SAN DIEGO, CA
AGREEMENT NO. 244-2016AC**

The parties to this Amendment No. 3 to Agreement are the SAN DIEGO UNIFIED PORT DISTRICT, a public corporation (District) and GREAT ECOLOGY & ENVIRONMENTS, INC., a California Corporation (Service Provider).

Recitals:

District and Service Provider are parties to an Agreement for Mitigation Bank Consulting Services for the Pond 20 Site, San Diego. The agreement is on file in the Office of the District Clerk as Document No. 65819 dated November 23, 2016, as amended by Amendment No. 1, Document No. 67604 dated December 26, 2017, as amended by Amendment No. 2, Document No. 67173 dated December 18, 2018. It is now proposed to extend the agreement from December 31, 2018, to June 30, 2019, increase the Agreement by \$164,500, and amend Attachment A and Attachment B.

The Parties Agree:

1. Section 3.a., **Maximum Expenditure**, is hereby increased by \$164,500 from a total amount of \$692,720 to a new maximum expenditure of \$857,220.
2. Attachment A, **SCOPE OF SERVICES**, shall be amended to **ADD the following subtasks:**

ADDITIONS TO TASK 1

Subtask 7: Evaluation for Planned Wetlands Presentation

Consultant shall provide presentation on Evaluation for Planned Wetlands (EPW) functional assessment methodology for the Pond 20 mitigation bank.

- a. Prepare an EPW overview presentation for IRT members;
- b. Give presentation at an upcoming IRT meeting.

ADDITIONS TO TASK 2

Subtask 7: Develop 2-Dimensional Hydraulic Model

Consultant shall develop a 2-dimensional hydraulic model to assess hydrodynamics in coordination with an adjacent restoration project, and to complete sea level rise (SLR) and hydraulic modeling.

- a. Convert one-dimensional MIKE11, identified in Task 2 Subtask 2, to a two-dimensional unsteady HEC-RAS hydraulic model.
- b. Two-dimensional model will use Pond 20 topography data, tide data collected under Task 2 Subtask 5, and any data provided by Poseidon that was used to model the ORERP.
- c. Conduct hydrodynamic modeling of Otay River for 100-year flood assessment with and without the Pond 20 project, and for cumulative conditions with the Poseidon project, using the two-dimensional model.
- d. Model and assess the potential hydrodynamic and scour effects of removing the berm, including flooding along the urban perimeter of the site and erosion or scour of the restoration site associated with potential channel avulsion.
- e. Analysis will be used to inform the project design (Task 2, Subtask 1, Task 2, Subtask 6, and Task 3, Subtask 1) and complete the SLR analysis instead of using the one-dimensional MIKE11 model.
- f. Modeling and analyses will be documented in the modeling report, and associated data and model program will be provided to the District upon request.

Subtask 8: No-ORERP Scenario

Consultant shall complete modeling for a No-ORERP Scenario.

- a. Hydrodynamic modeling to evaluate changes to tidal and storm (i.e., 100-year event) flows for the scenario where the ORERP project is not constructed, Pond 20 is constructed, and the temporary berm remains in place.
- b. This task does not include design development.

- c. This scope covers the same model runs proposed in Task 2, Subtask 2 and Task 2, Subtask 5, but for this additional scenario.

Subtask 9: Modeling Report

Consultant shall prepare a stand-alone, modeling technical report that includes documentation of the model development, model runs, and results.

- a. Modeling report will inform the CEQA hydrology and biology analyses and will be included as an attachment to the 60% Basis of Design Report.
- b. Hydrologic modeling documented in this report will include SLR analysis and No-ORERP scenario modeling, as well as tide data collection and scour analysis.
- c. Consultant shall provide a draft and final modeling report.

Subtask 10: Poseidon Coordination and ORERP Design Review

Consultant shall coordinate with Poseidon and provide a review of the ORERP design.

- a. Attendance at one meeting with Poseidon and the ORERP team on model development and design review.
- b. This will include coordination on the design of the temporary berm to allow for removal under the Pond 20 project.
- c. Complete design review memos for the 60%-complete design.
- d. Consultant shall provide design review memos for the ORERP 60%-complete design.

Subtask 11: Alternative Design Concept

Consultant shall complete an alternative design concept for EIR/EA and jurisdictional determination planning.

- a. Complete one alternative design concept and figures to avoid impacts to potentially jurisdictional areas in the borrow pits and eliminate upland transition zone in the borrow pit areas;
- b. Provide estimates of habitat acreage established, habitat acreage converted, and amount of fill generated, for each alternative;

- c. Attendance at one meeting with the District to review the draft alternative design concept.

- (1) Consultant shall prepare one alternative design concept figure; and estimates of habitat acreage, fill, and impacts to potentially jurisdictional features.

ADDITIONS TO TASK 3

Subtask 4: Sea Level Rise Analysis

Consultant shall complete a SLR analysis and hydraulic assessment to support planning, permitting and certification, including the CEQA/NEPA and Coastal Act Review planning processes.

- a. Assess changes in tidal and storm flows under SLR conditions.
- b. Complete an ecological analysis to predict shifts in habitat distributions and types at the site over time.
- c. The analysis will be completed on the updated 30% design and the No-ORERP scenario (a scenario where the ORERP is not constructed, Pond 20 is constructed, and the temporary berm remains in place), and will cover the Bank Parcel and Parcels A, B, and C of the District's Pond 20 property.
- d. Modeling will use the 2-D model and will focus on four SLR scenarios and time periods for both tidal and storm flows. Scenario selection should be consistent with other District planning efforts, which is based on latest policy and science guidance (currently OPC 2018 Guidance). SLR projections/scenarios, both with and without storm events, shall be evaluated for the 5% probability for years 2030 (0.7 feet), 2050 (1.4 feet), and 2100 (4.5 feet); and the 50% probability for year 2100 (2.6 feet). The analysis shall identify any areas of potential project impacts due to potential future increases in sea level rise (temporary coastal flooding, and permanent inundation) and if the project exacerbates potential impacts on

the environment resulting from sea level rise or associated events (e.g., coastal flooding, wave over-topping, erosion, etc.).

e. Modeling will cover the following:

(1) Existing Conditions (eight runs)

- (a) 100-year fluvial event under four SLR scenarios
- (b) Typical tides under four SLR scenarios

(2) Updated 30% Design (eight runs)

- (a) 100-year fluvial event under four SLR scenarios
- (b) Typical tides under four SLR scenarios

(3) No-ORERP Scenario (eight runs)

- (a) 100-year fluvial event under four SLR scenarios
- (b) Typical tides under four SLR scenarios

f. Methodology and results will be reported in the modeling report.

g. Consultant shall prepare a separate technical memorandum summarizing the implications of the SLR modeling results on expected habitat resiliency, including shifts in distribution and acreage, prepared in tandem with the modeling report.

3. Attachment A, **SCOPE OF SERVICES**, shall be amended to REPLACE the **SCHEDULE** with the following:

SCHEDULE

Consultant shall begin work upon execution on this Agreement. The scope of work is anticipated to be completed by June 2019. TASK 1, Subtask 7 is anticipated to be completed at an IRT meeting (date to be determined, while completion of TASK 2, Subtask 10 is dependent on the availability of the ORERP 60% design. TASK 2, Subtask 4 and Subtask 9 are required to complete the project environmental review and will be prioritized to the extent feasible. The scope of work for each task will be conducted concurrently where feasible for maximum schedule efficiency. **The schedule is subject to change upon agreement by both the District and Consultant.**

4. Attachment B, **COMPENSATION & INVOICING**, table shall be REPLACED with the following:

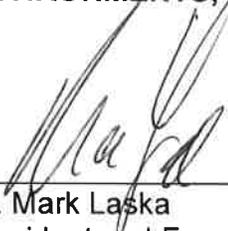
TASK No.	DESCRIPTION	ORIGINAL AMOUNT	AMD1	AMD2	AMD3
Task 1	Baseline Investigations	\$183,350	\$183,350	\$183,350	\$188,350
Task 2	General Development Plan and 30% Design	\$167,560	\$190,060	\$220,060	\$309,060
Task 3	60% Design	\$148,310	\$148,310	\$148,310	\$199,310
Task 4	Mitigation Bank Regulatory Elements	\$96,000	\$96,000	\$96,000	\$96,000
Task 5	Project Management, Communication and Project Summary Documentation	\$45,000	\$45,000	\$45,000	\$64,500
TOTAL (NOT-TO EXCEED)		\$640,220	\$662,720	\$692,720	\$857,220

- 5. All other terms, covenants, and conditions in the original Agreement shall remain in full force and effect and shall be applicable to this Amendment.

SAN DIEGO UNIFIED PORT DISTRICT

**GREAT ECOLOGY &
ENVIRONMENTS, INC.**

Jason H. Giffen
Assistant Vice President
Planning & Green Port



Dr. Mark Laska
President and Founder

Approved as to form and legality:
GENERAL COUNSEL

By: Assistant/Deputy

A manually signed copy of this Amendment transmitted by email or any other means of electronic transmission shall be deemed to have the same legal effect as delivery of an original signed copy of this Amendment.