

Date: January 15, 2020
To: Geraldine Trivedi, City of Redondo Beach
From: Geosyntec Consultants
Subject: South Bay Beach Cities Revised EWMP
Proposal to Revise EWMP and Provide Feasibility Studies

As specified in the 2012 Los Angeles MS4 Permit (NPDES Order No. R4-2012-0175, including subsequent amendments), each Permittee/Watershed Management Group (WMG) is required to submit an updated Enhanced Watershed Management Plan (EWMP) with an updated Reasonable Assurance Analysis (RAA) by June 30, 2021. This draft proposal has been prepared for the City of Redondo Beach on behalf of the South Bay Beach Cities WMG by Geosyntec Consultants (Geosyntec) in support of these forthcoming revisions to the Beach Cities EWMP.

Additionally, Geosyntec has prepared this proposal to include the analyses and documentation necessary to complete up to four project feasibility studies in accordance with the Safe Clean Water Program Feasibility Study Guidelines.¹

Importantly, many of the assumptions used to draft this proposal are subject to change based on the following:

1. A new Los Angeles MS4 Permit is expected to be released prior June 30, 2021. This new permit may have different or additional requirements related to the revised EWMPs and RAAs.
2. The above-referenced Feasibility Study Guidelines are brand new and subject to change, particularly as projects throughout the County begin to gather data and apply for Measure W funding.²

¹ As adopted by Los Angeles County Flood Control District (Chief Engineer Daniel Lafferty) on September 19, 2019.

² Geosyntec will be attending a meeting hosted by Los Angeles County on November 12 that is designed to shed further light on the project application and selection process.

In light of these potential impacts, we have included parenthetical notes within this proposal to identify areas that may be subject to significant scope/budget alteration.

SCOPE OF WORK

The drafted scope of work covers project management (Task 1), planning and preparation related to the revised EWMP (Task 2), re-running the RAA and revising the EWMP per the 2012 MS4 Permit (Task 3), and completion of the feasibility studies (Task 4).

Task 1 – Project Management, Coordination, and Meetings

All activities related to the management of the Project, including meeting attendance, coordination, communication, and scope/schedule/cost management will be provided under this task. Specifically, Task 1 includes the following:

- Attendance at all monthly WMG meetings for the duration of the contract (assumed to be January 2020 through June 2021). As Geosyntec already attends a significant number of Beach Cities WMG meetings for the Beach Cities CIMP Implementation, some cost savings have been assumed for this task.
- Attendance at up to four additional meetings, including those with Regional Board Staff or Technical Advisory Committee members.
- Participation in Project-related calls.
- Additional project management duties necessary to complete the Project (e.g., coordination with subconsultants; response to emails; scheduling; etc.)

Task 1 Deliverables

- Summary notes from meetings.
- Preparation of support material for meetings on an as-needed basis.
- Detailed Project schedule.

Task 2 – Revised EWMP Planning

As part of the original EWMP, an EWMP Work Plan was required to be submitted to the Regional Board. Although that does not appear to be a requirement for the revised EWMP, there are some key components of the Work Plan process that will be necessary to complete prior to revised RAA/EWMP being completed. These components include:

- Updated analyses for all applicable water quality data and confirmation of the various water quality priorities to be included in the revised EWMP. Much of this analysis has been completed by Geosyntec as part of the WMG's Annual Report and IMCR process, though some additional analyses are likely necessary for

completion of the RAA (e.g., a long-term trends analysis of shoreline bacteria data).

- Updates to the existing and potential stormwater control measures in the Beach Cities Area. This collaborative effort will aim to identify all stormwater controls that will need to be analyzed as part of the revised RAA/EWMP, including prioritization of regional projects to be considered within a few key subwatersheds.
- A summary of proposed changes to the RAA process

Task 2 Deliverables

- A draft memorandum summarizing results of analyses performed related to the water quality prioritization, as well as a summary of any changes proposed to the EWMP/RAA related to these water quality priorities.
- A draft memorandum summarizing existing and proposed BMPs based on the approved Beach Cities EWMP, including the removal of BMPs no longer considered for implementation as well as the identification of new BMPs already identified by the WMG.
- A draft memorandum summarizing proposed changes to the RAA.

Task 2 Assumptions

- All memoranda will be submitted electronically in Word/PDF format.
- Unless otherwise directed, the deliverables will not be finalized, but will be incorporated into the revised EWMP, as appropriate.

Task 3 – Revised EWMP

This task will cover the completion of the revised EWMP, including updating and re-running the RAA. Per the 2012 MS4 Permit, the RAA software will be modified with the addition of applicable water quality data, and will be calibrated (to the extent feasible) based on flow data collected per the Beach Cities CIMP. The RAA will then iteratively analyze various BMP scenarios in targeted watersheds to seek to identify a project implementation strategy that demonstrates reasonable assurance of compliance while also meeting the Beach Cities needs with respect to siting, funding, scheduling, etc.

Unlike the original Beach Cities EWMP, the revised EWMP will be reformatted for consistency with more-recent EWMPs (e.g., the Rio Hondo/San Gabriel River Revised EWMP, 2018). This will entail moving most technical information to appendices and simplifying the main body of the EWMP in an effort to make it more user-friendly.

Task 3 Deliverables

- Revised EWMP, in electronic format (draft, final draft, and final).

Task 3 Assumptions

- SBPAT will be used to perform the RAA, consistent with the approved EWMP. The Torrance-Dominguez portion of the Beach Cities Area will be revised to be modeled with SBPAT, consistent with the rest of the Beach Cities EWMP.
- The spatial database and watershed hydrology used in the approved EWMP is assumed to be unchanged, with the exception of changes due to watershed control measures.
- The revised EWMP will not include the Machado Lake Watershed.
- This task assumes one round of consolidated comments from the Beach Cities WMG on the draft revised EWMP. Upon incorporation of the comments and finalization of the draft revised EWMP, the document will be submitted to the Regional Board by June 30, 2019. One round of revision is assumed based on comments received from the Regional Board. A final version will then be re-submitted to the Regional Board.

[As previously mentioned, the requirements of the RAA and revised EWMP may be changed based on the expected revised MS4 Permit. If more flexibility is provided with the RAA processes, we could propose a simplified solution for re-running the RAA, which would allow us to trim this scope. Without changes to the Permit requirements, we may be able to simplify the RAA approach in some ways, though we'd need to get buyoff from the Regional Board.]

We are also flexible if the Group is interested in using an alternative model for the RAA. For example, we could switch to using WMMS. Although the impacts of this on the modeling results are unknown at this stage, WMMS appears to be applied more widely throughout the County, and has been consistently maintained by the County (via Paradigm) since the drafting of the original EWMPs. It therefore may provide the Group more flexibility moving forward after the revised EWMP. Alternatively, we are happy to discuss other user-friendly RAA options we have employed in other watersheds (e.g., Orange County). Such an alternative would still use the technical methodology of SBPAT, but would provide the Group a web-based tool to continuously update and manage their various stormwater projects over time.]

Task 4 – Safe, Clean Water Program Feasibility Studies

In conjunction with the revised EWMP and the identification of new stormwater projects within the Beach Cities Area, Geosyntec will provide feasibility studies for up to four (4) stormwater projects. The feasibility studies will be prepared in accordance with the Safe Clean Water Program Feasibility Study Guidelines and will include:

- Project background and other applicable narrative;

- Preliminary design and engineering analysis, including water quality and water supply benefits analysis;
- Information derived from a preliminary site investigation, including environmental history (via a Phase I records search and ASTM report) and utilities clearance;
- Geotechnical information, including a preliminary geotechnical investigation for three of the projects. Each geotechnical investigation will be performed to evaluate the soil characteristics, geologic conditions, and groundwater conditions with regard to the feasibility of on-site stormwater infiltration. The geotechnical evaluation will include subsurface exploration, field infiltration testing, geotechnical laboratory testing, and focused engineering analyses. The findings of the geotechnical evaluation will be presented in a technical letter report to be appended to the feasibility study;
- A monitoring plan;
- An operations and maintenance plan;
- A lifecycle cost analysis; and
- Additional information such as community benefits, vector control analysis, etc.

A key component to this task is public outreach in order to ensure the community has adequate input on project development. Public outreach is proposed to be led by Murakawa Communications located in Redondo Beach. Murakawa Communications has a close relationship with Geosyntec and has been supporting Geosyntec with public outreach and marketing for years. Their goal for this Project will be to sufficiently inform the communities about upcoming work that will serve these neighborhoods for years to come. It is their mission to make sure that all community members are sufficiently heard and that a strong rapport is established with the communities to ensure a successful completion of the various stormwater Projects.

Murakawa Communications' scope of work includes:

- Planning/communications with the Beach Cities WMG;
- Reconnaissance work (such as canvassing, surveying, scouting);
- Production and distribution of collateral documents to be used in information sharing;
- Placement of advertisements through various print and social media outlets;

- Leadership of up to six community meetings and/or individual stakeholder meetings with key constituencies.

Task 4 Deliverables

- Draft and Final Feasibility Report for each project (maximum of four)
- Public outreach material, including meeting flyers, advertisements, and social media.

Task 4 Assumptions

- Each feasibility study will be submitted electronically.
- One of the four projects assumed for the feasibility studies is the Torrance Basin Enhancement Project, which will have significant design work completed (by others) for inclusion in the feasibility study.
- Geotechnical investigations have been assumed to be needed for three projects. The Geotechnical work at each project includes:
 - Review of readily available background materials, including published topographic maps, geologic maps and literature, groundwater data, and aerial photographs.
 - Review of seismic data, including fault hazard maps, seismic hazard maps, and other readily available data regarding geologic and seismic hazards within the project area.
 - A site reconnaissance to document the surficial conditions.
 - Obtain drilling permits and prepare traffic/pedestrian control plans and field inspection meetings.
 - Subsurface exploration comprised of up to four exploratory Hollow Stem Auger (HAS) boreholes. The borings will be drilled with a truck-mounted drill rig and will be logged by our engineer/geologist. Relatively undisturbed samples using a standard penetration test (SPT) and California Modified samplers will be collected at 5 feet intervals starting at 5 feet below ground surface. Bulk samples will be obtained at selected intervals from the boreholes. The upper five feet of each boring will be hand augured. The soil samples will be transported to a geotechnical laboratory for testing. Borings not used for infiltration testing will be backfilled using a mixture of soil and bentonite. Infiltration wells will be pressure grouted at the completion of testing.
 - Perform in-situ infiltration testing in selected borehole locations. In-situ infiltration tests will be performed at depths of approximately 10 to 20 feet below ground surface. The infiltration testing will be in general

accordance with United States Bureau of Reclamation test method USBR 7300-89.³

- Conduct geotechnical laboratory testing of representative soil samples to evaluate in-situ moisture and dry density, gradation, Atterberg limits, and shear strength.
- Environmental testing of representative soil samples to test for the presence of metals, lead, hydrocarbons, VOCs, semi-volatile VOCs, pesticides, and PCBs.
- Preparation of a letter report that includes data compilation and engineering analysis of the information obtained from our background review, subsurface evaluation, and laboratory testing. Our engineering analyses and recommendations will include:
 - Suitability of the site for the proposed infiltration from a geotechnical perspective;
 - Description of the encountered soil conditions, including a discussion of potential geologic and seismic hazards;
 - Measured depth to groundwater based on subsurface exploration and readily available records regarding groundwater in the vicinity.
- Expenses related to geotechnical work (including drillers and laboratory expenses) have been assumed to not exceed \$48,000.
- Murakawa Communications has provided a cost estimate based on significant outreach for up to three projects (each in a separate city/community).

[Without knowing the specific projects for which these feasibility studies will be written, there are numerous unknowns which needed to be assumed for scoping purposes. For example, the assumption about three geotechnical investigations being required is based on the assumption that not all projects will be infiltration projects. Given the high cost of an initial geotechnical investigation, this assumption will have a significant cost impact

³ The Los Angeles County Administrative Manual titled, “Guidelines for Design, Investigation, and Reporting Low Impact Development Stormwater Infiltration” (2014) outlines a Percolation Basin Testing Procedure to be followed for proposed stormwater infiltration systems with volumes greater than 10,000 gallons that are installed as part of Low Impact Development stormwater infiltration. However, Geosyntec has successfully performed the USBR 7300-89 infiltration test method for similar projects and recommends this method as an alternative to the Percolation Basin Testing Procedure outlined in the Los Angeles County Administrative Manual.

if changed. Similarly, we have assumed a very basic monitoring plan and O&M plan at this stage of project development. Depending on what the Group may prefer with respect to the level of detail of these items, this scope can be modified accordingly.]

SCHEDULE

The draft final revised EWMP will be ready for submission to the Regional Board by June 30, 2021, with the first draft submitted to the Group prior to this with sufficient time for review and subsequent edits.

The schedule for the feasibility studies will be determined based on collaboration with the Group, specifically to determine which round of funding the various feasibility studies will be submitted for.

A detailed schedule for the Project will be created upon NTP.

BUDGET

The proposed services will be billed on a time and materials basis. A cost summary is provided below.

Task	Geosyntec Cost	Subs/Other Costs	Total
1 – Project Management	\$27,720	\$500	\$28,220
2 – Revised EWMP Planning	\$40,140	-	\$40,140
3 – Revised RAA/EWMP	\$150,688	-	\$150,688
4 – Feasibility Studies	\$274,043	\$139,491	\$413,534
Total	\$492,242	\$139,991	\$632,582

A detailed breakdown of this estimate is provided in Attachment 1.

[There's much room for flexibility with this budget, based on the needs and desires of the Group. If it makes sense for the Group, a contingency allotment may help with any unforeseen changes (e.g., more geotechnical work).]

Attachment 1

Cost Breakdown

Scope Items		Sr. Principal	Principal	Senior Professional	Project Professional	Professional	Sr Staff Professional	Staff Professional	Project Admin	Subtotal Labor Hours	Labor Cost	Subs/Expense Charges	10% Markup	Total
		\$ 262	\$ 240	\$ 220	\$ 196	\$ 174	\$ 153	\$ 132	\$ 72					
1.0	Project Management, Coordination and Meetings	12	78	0	0	20	8	0	16	134	\$ 27,720	\$ 500		\$ 28,220
2.0	Revised Enhanced Watershed Management Program (rEWMP) Work Plan	12	27	0	45	0	128	16	0	228	\$ 40,140.00	\$ -		\$ 40,140
2.1	Identification of Water Quality Priorities	7	7	0	15	0	48	16	0	93	\$ 15,910	\$ -		\$ 15,910
2.2	Summary of Existing and Potential Control Measures	1	11	0	18	0	48	0	0	78	\$ 13,774	\$ -		\$ 13,774
2.3	Reasonable Assurance Analysis Approach	4	9	0	12	0	32	0	0	57	\$ 10,456	\$ -		\$ 10,456
3.0	Enhanced Watershed Management Program (EWMP) Plan	40	84	100	92	120	352	40	0	828	\$ 150,688	\$ -		\$ 150,688
3.1	Develop List of Regional Projects and Conduct Initial Screening	8	8	0	16	0	32	0	0	64	\$ 12,048	\$ -		\$ 12,048
3.2	Identify Selected Watershed Control Measures and Conduct Reasonable Assurance Analysis	16	48	100	0	120	160	0	0	444	\$ 83,072	\$ -		\$ 83,072
3.3	Prepare Draft and Final rEWMP Plans	16	28	0	76	0	160	40	0	320	\$ 55,568	\$ -		\$ 55,568
4.0	Safe Clean Water Feasibility Study (4 Projects)	18	86	120	314	32	959	64	0	1593	\$ 274,043	\$ 126,810	\$ 12,681	\$ 413,534
4.1	Project Planning and Details	2	24	0	136	0	284	0	0	446	\$ 76,392	\$ -		\$ 76,392
4.2	Preliminary Design/Engineering Analysis	0	30	120	98	32	515	64	0	859	\$ 145,619	\$ 48,500	\$ 4,850	\$ 198,969
4.3	Prepare Draft and Final Feasibility Study	8	16	0	80	0	160	0	0	264	\$ 46,096	\$ -		\$ 46,096
4.4	Public Outreach	8	16							24	\$ 5,936	\$ 78,310	\$ 7,831	\$ 92,077
Totals		82	275	220	451	172	1447	120	16	2783	\$ 492,591	\$ 127,310	\$ 12,681	\$ 632,582

Murakawa Communications Budget

#	Task	Estimated Costs Direct and Indirect						Totals
		TM		JM		AI		
		Hours	\$ 200	Hours	\$ 80	Hours	\$ 60	
1.0	Project Management							
1.1	Client communication and meetings	20	\$ 4,000	20	\$ 1,600	20	\$ 1,200	\$ 6,800
1.2	Reconnaissance (Canvassing, Survey, etc.)	24	\$ 4,800	72	\$ 5,760	72	\$ 4,320	\$ 14,880
1.3	Project database		\$ -	9	\$ 720	9	\$ 540	\$ 1,260
2.0	Community and stakeholder meetings				\$ -		\$ -	
2.1	Stakeholder meetings	60	\$ 12,000	60	\$ 4,800	36	\$ 2,160	\$ 18,960
2.2	Community meetings	42	\$ 8,400	42	\$ 3,360	48	\$ 2,880	\$ 14,640
3.0	Collateral development							
3.1	Project fact sheet	8	\$ 1,600	8	\$ 640		\$ -	\$ 2,240
3.2	Meeting Flyer	8	\$ 1,600	8	\$ 640		\$ -	\$ 2,240
3.3	Ads (Print & Social Media)	6	\$ 1,200	6	\$ 480	6	\$ 360	\$ 2,040
3.4	Media relations	6	\$ 1,200	6	\$ 480	6	\$ 360	\$ 2,040
	Subtotal labor	174	\$ 34,800	231	\$ 18,480	197	\$ 11,820	
	10% (Profit) fee		\$ 3,480		\$ 1,848		\$ 1,182	
	Subtotal labor costs and fee		\$ 38,280		\$ 20,328		\$ 13,002	\$ 71,610
	Direct Costs							
	Printing and reproduction		\$ 1,000					
	Advertisements		\$ 3,000					
	Graphic design		\$ 1,500					
	Meeting supplies		\$ 1,200					
	Subtotal		\$ 6,700					
	Total construction awareness budget		\$ 78,310					