

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

Visayas Avenue, Diliman, Quezon City, 1128

**SUPPLY, DELIVERY AND
APPLICATION OF BIOREMEDIATION
SOLUTION FOR THE WATER QUALITY
IMPROVEMENT OF VARIOUS
ESTEROS**

Bid Ref. No. DENR-CO-2022-040 REBID

Approved Budget for the Contract: P3,770,000.00

BIDS AND AWARDS COMMITTEE

September 2022

**DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES**

Visayas Avenue, Diliman, Quezon City, 1128

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Glossary of Acronyms, Terms, and Abbreviations

ABC	: Approved Budget for the Contract.
BAC	: Bids and Awards Committee.
Bid	: A signed offer or proposal to undertake a contract submitted by a bidder in response to and in consonance with the requirements of the bidding documents. Also referred to as <i>Proposal</i> and <i>Tender</i> . (2016 revised IRR, Section 5[c])
Bidder	: Refers to a contractor, manufacturer, supplier, distributor and/or consultant who submits a bid in response to the requirements of the Bidding Documents. (2016 revised IRR, Section 5[d])
Bidding Documents	: The documents issued by the Procuring Entity as the bases for bids, furnishing all information necessary for a prospective bidder to prepare a bid for the Goods, Infrastructure Projects, and/or Consulting Services required by the Procuring Entity. (2016 revised IRR, Section 5[e])
BIR	: Bureau of Internal Revenue.
BSP	: Bangko Sentral ng Pilipinas.
Consulting Services	: Refer to services for Infrastructure Projects and other types of projects or activities of the GOP requiring adequate external technical and professional expertise that are beyond the capability and/or capacity of the GOP to undertake such as, but not limited to: (i) advisory and review services; (ii) pre-investment or feasibility studies; (iii) design; (iv) construction supervision; (v) management and related services; and (vi) other technical services or special studies. (2016 revised IRR, Section 5[i])
CDA	: Cooperative Development Authority.
Contract	: Refers to the agreement entered into between the Procuring Entity and the Supplier or Manufacturer or Distributor or Service Provider for procurement of Goods and Services; Contractor for Procurement of Infrastructure Projects; or Consultant or Consulting Firm for Procurement of Consulting Services; as the case may be, as recorded in the Contract Form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.
CIF	: Cost Insurance and Freight.
CIP	: Carriage and Insurance Paid.
CPI	: Consumer Price Index.
DDP	: Refers to the quoted price of the Goods, which means “delivered duty paid.”
DTI	: Department of Trade and Industry.
EXW	: Ex works.
FCA	: “Free Carrier” shipping point.
FOB	: “Free on Board” shipping point.
Foreign-funded Procurement or Foreign-Assisted Project	: Refers to procurement whose funding source is from a foreign government, foreign or international financing institution as specified in the Treaty or International or Executive Agreement. (2016 revised IRR, Section 5[b]).
Framework Agreement	: Refers to a written agreement between a procuring entity and a supplier or service provider that identifies the terms and conditions, under which specific purchases, otherwise known as “Call-Offs,” are made for the duration of the agreement. It is in the nature of an option contract between the procuring entity and the bidder(s) granting the procuring entity the option to either place an order for any of the goods or services identified in the Framework Agreement List or not buy at all, within a



minimum period of one (1) year to a maximum period of three (3) years. (GPPB Resolution No. 27-2019)

GFI	: Government Financial Institution.
GOCC	: Government-owned and/or –controlled corporation.
Goods	: Refer to all items, supplies, materials and general support services, except Consulting Services and Infrastructure Projects, which may be needed in the transaction of public businesses or in the pursuit of any government undertaking, project or activity, whether in the nature of equipment, furniture, stationery, materials for construction, or personal property of any kind, including non-personal or contractual services such as the repair and maintenance of equipment and furniture, as well as trucking, hauling, janitorial, security, and related or analogous services, as well as procurement of materials and supplies provided by the Procuring Entity for such services. The term “related” or “analogous services” shall include, but is not limited to, lease or purchase of office space, media advertisements, health maintenance services, and other services essential to the operation of the Procuring Entity. (2016 revised IRR, Section 5[r])
GOP	: Government of the Philippines.
GPPB	: Government Procurement Policy Board.
INCOTERMS	: International Commercial Terms.
Infrastructure Projects	: Include the construction, improvement, rehabilitation, demolition, repair, restoration or maintenance of roads and bridges, railways, airports, seaports, communication facilities, civil works components of information technology projects, irrigation, flood control and drainage, water supply, sanitation, sewerage and solid waste management systems, shore protection, energy/power and electrification facilities, national buildings, school buildings, hospital buildings, and other related construction projects of the government. Also referred to as <i>civil works or works</i> . (2016 revised IRR, Section 5[u])
LGUs	: Local Government Units.
NFCC	: Net Financial Contracting Capacity.
NGA	: National Government Agency.
PhilGEPS	: Philippine Government Electronic Procurement System.
Procurement Project	: refers to a specific or identified procurement covering goods, infrastructure project or consulting services. A Procurement Project shall be described, detailed, and scheduled in the Project Procurement Management Plan prepared by the agency which shall be consolidated in the procuring entity's Annual Procurement Plan. (GPPB Circular No. 06-2019 dated 17 July 2019)
PSA	: Philippine Statistics Authority.
SEC	: Securities and Exchange Commission.
SLCC	: Single Largest Completed Contract.
Supplier	: refers to a citizen, or any corporate body or commercial company duly organized and registered under the laws where it is established, habitually established in business and engaged in the manufacture or sale of the merchandise or performance of the general services covered by his bid. (Item 3.8 of GPPB Resolution No. 13-2019, dated 23 May 2019). Supplier as used in these Bidding Documents may likewise refer to a distributor, manufacturer, contractor, or consultant.
UN	: United Nations.



Section I. Invitation to Bid

**INVITATION TO BID****SUPPLY, DELIVERY AND APPLICATION OF BIOREMEDIATION SOLUTION FOR THE WATER QUALITY IMPROVEMENT OF VARIOUS ESTEROS**
Bid Ref. No. DENR-CO-2022-040 REBID**Approved Budget for the Contract: ₱3,770,000.00**

1. The **Department of Environment and Natural Resources (DENR)** through the FY 2022 General Appropriations Act (GAA) intends to apply the sum of **Pesos: Three Million Seven Hundred Seventy Thousand (PhP3,770,000.00)** being the Approved Budget for the Contract (ABC) to payment under the contract for the **SUPPLY, DELIVERY AND APPLICATION OF BIOREMEDIATION SOLUTION FOR THE WATER QUALITY IMPROVEMENT OF VARIOUS ESTEROS:**

Lot	Description	Qty.	Total ABC ₱ (VAT Inclusive)	Funding Source	Bid Security: Bid Securing Declaration OR Cash/Cashier's/ Manager's Check, Bank Draft/ Guarantee, Irrevocable Letter of Credit*equivalent to at least 2% of the ABC (₱)	Bid Security: Surety Bond** (5%)(₱)	Cost/Price of Bid Documents (cash payment only) (₱)
Supply, Delivery and Application of Bioremediation Solution for the Water Quality Improvement of Various Esteros:							
1	Estero de Magdalena (Phase III)	1 lot	900,000.00	FY 2022 GAA	18,000.00	45,000.00	1,000.00
2	Estero de Paco (Phase II)	1 lot	890,000.00		17,800.00	44,500.00	1,000.00
3	Estero de Pandacan	1 lot	1,000,000.00		20,000.00	50,000.00	5,000.00
4	Estero de Kabulusan	1 lot	980,000.00		19,600.00	49,000.00	1,000.00
TOTAL			3,770,000.00		75,400.00	188,500.00	8,000.00

* **Only those issued and confirmed by a Local Universal or Local Commercial Bank**

** **Must be callable upon demand issued by a Surety or Insurance Company duly certified by the Insurance Commission as authorized to issue such bond**

2. Bidders may bid for one (1) lot or all lots.
3. Bids received in excess of the ABC shall automatically be rejected at Bid opening. Late bids shall not be accepted.



4. DENR now invites Bids from eligible bidders for the **SUPPLY, DELIVERY AND APPLICATION OF BIOREMEDIATION SOLUTION FOR THE WATER QUALITY IMPROVEMENT OF VARIOUS ESTEROS** (hereinafter referred to as GOODS AND SERVICES)
5. Supply, delivery and application must be completed in accordance with the Terms of Reference per Section VI of the bidding documents.
6. A prospective Bidder must have completed within the last five (5) years a Single contract of similar nature amounting to at least fifty percent (50%) of the ABC of the lot/s being bid.

*Similar in nature shall mean **“Bioremediation Solution for Water Quality Improvement”**.*

7. Open competitive bidding procedures will be conducted using a non-discretionary “pass/fail” criterion as specified in the Revised Implementing Rules and Regulations (IRR) of Republic Act (R.A.) 9184, otherwise known as the “Government Procurement Reform Act”. All particulars relative to this bidding including Eligibility Checking, Bid Security, Evaluation and Post-Qualification Procedures and Award of Contract shall be governed by R.A. 9184 and its Revised IRR.
8. Bidding is restricted to Filipino citizens/sole proprietorships, partnerships, or organization with at least sixty percent (60%) interest or outstanding capital stock belonging to citizens of the Philippines, and to citizens or organizations of a country the laws or regulations of which grant similar rights or privileges to Filipino citizens, pursuant to RA 5183.
9. The Invitation to Bid and Bidding Documents may be downloaded free of charge from the website of the Philippine Government Electronic Procurement System (PhilGEPS) and DENR website at www.denr.gov.ph.
10. The complete set of Bidding Documents may be acquired by interested bidders upon payment of the corresponding fee as indicated above not later than the schedule of submission of bids. The Bidding Documents shall be received personally by the prospective Bidder or his duly authorized representative upon presentation of proper identification document.
11. The **Schedule of Bidding Activities** shall be as follows:

ACTIVITIES	DATE & TIME	VENUE/MODE
1. Sale and Issuance of Bid Documents	9:00 AM to 4:00 PM only Mondays to Fridays Starting 14 September 2022	BAC Secretariat c/o Dianne G. Ibias at BAC Secretariat Office, Basement, DENR Main Bldg., DENR Compound, Visayas Ave., Diliman, Quezon City
2. Pre-Bid Conference	27 September 2022, (Tuesday) 1:30 PM	Online via Google Meet Platform**
3. Submission of Bid Documents	11 October 2022, (Thursday) 10:00 AM	BAC Secretariat Office, Basement, DENR Main Bldg., Visayas Ave., Diliman, Quezon City
4. Opening of Bids	11 October 2022, (Thursday) 1:30 PM	Online via Google Meet Platform**

**** Only two (2) pre-registered representatives per bidder shall be allowed to participate in the Google Meet videoconference.**



12. Prospective Bidders interested to join the Pre-Bid Conference and Bid Opening through Google Meet video conference may send request for the link to the bac.co@denr.gov.ph with the following information together with proof of identity of the attendee at least a day before the scheduled conference:

a. Name of Project:	
b. Bid Reference No.:	
c. Activity:	
d. Company Name:	
e. Company Address:	
f. Name of Representative/s (maximum of 2 personnel only)	i.
	ii.
g. Email Address/es (to which all communications from the Bids and Awards Committee shall be sent):	i.
	ii.
h. Attach Scanned Copy or Photo of Identity	

For the Pre-Bid Conference, bidders are encouraged to send their authorized technical representative/s or personnel who are familiar with the bid requirements and will prepare the documents for the bidder.

13. Interested bidders may obtain further information from the BAC Secretariat c/o Dianne G. Ibias from 8:00 AM to 5:00 PM only, Mondays to Fridays starting **14 September 2022** at Tel. No. (02) 8926-2675. However, any queries relative to the content of the bid documents and the project requirements can only be made not later than ten (10) calendar days prior to the Submission and Opening of Bids.
14. DENR reserves the right to reject any and all bids, declare a failure of bidding, or not award the contract at any time prior to contract award in accordance with Section 41 of RA 9184 and its IRR, without thereby incurring any liability to the affected bidder/s.

NORLITO A. ENERAN, LL.M., CESO II
Director, Legal Affairs Service and
Vice Chairperson, Bids & Awards Committee
Date: **13 September 2022**



Section II. Instructions to Bidders



1. Scope of Bid

The Procuring Entity, **Department of Environment and Natural Resources-Central Office**, wishes to receive Bids for the **SUPPLY, DELIVERY AND APPLICATION OF BIOREMEDIATION SOLUTION FOR THE WATER QUALITY IMPROVEMENT OF VARIOUS ESTEROS**, with identification number **DENR-CO-2022-040 REBID**.

The Procurement Project (referred to herein as "Project") is composed of **Four (4) Lots**, the details of which are described in Section VII (Technical Specifications).

2. Funding Information

2.1. The GOP through the source of funding as indicated below for **FY 2022 General Appropriations Act** in the amount of Pesos: **Three Million Seven Hundred Seventy Thousand (PhP3,770,000.00)**, detailed below:

Lot No.	Description	Project ABC (PhP)
1	Estero de Magdalena (Phase III)	900,000.00
2	Estero de Paco (Phase II)	890,000.00
3	Estero de Pandacan	1,000,000.00
4	Estero de Kabulusan	980,000.00
TOTAL PROJECT ABC		3,770,000.00

2.2. The source of funding is **NGA, General Appropriations Act**.

3. Bidding Requirements

The Bidding for the Project shall be governed by all the provisions of RA No. 9184 and its 2016 revised IRR, including its Generic Procurement Manuals and associated policies, rules and regulations as the primary source thereof, while the herein clauses shall serve as the secondary source thereof.

Any amendments made to the IRR and other GPPB issuances shall be applicable only to the ongoing posting, advertisement, or **IB** by the BAC through the issuance of a supplemental or bid bulletin.

The Bidder, by the act of submitting its Bid, shall be deemed to have verified and accepted the general requirements of this Project, including other factors that may affect the cost, duration and execution or implementation of the contract, project, or work and examine all instructions, forms, terms, and project requirements in the Bidding Documents.

4. Corrupt, Fraudulent, Collusive, and Coercive Practices

The Procuring Entity, as well as the Bidders and Suppliers, shall observe the highest standard of ethics during the procurement and execution of the contract. They or through an agent shall not engage in corrupt, fraudulent, collusive, coercive, and obstructive practices defined under Annex "I" of the 2016 revised IRR of RA No. 9184 or other integrity violations in competing for the Project.

5. Eligible Bidders

5.1. Only Bids of Bidders found to be legally, technically, and financially capable will be evaluated.



- 5.2. Foreign ownership exceeding those allowed under the rules may participate pursuant to:
- i. When a Treaty or International or Executive Agreement as provided in Section 4 of the RA No. 9184 and its 2016 revised IRR allow foreign bidders to participate;
 - ii. Citizens, corporations, or associations of a country, included in the list issued by the GPPB, the laws or regulations of which grant reciprocal rights or privileges to citizens, corporations, or associations of the Philippines;
 - iii. When the Goods sought to be procured are not available from local suppliers; or
 - iv. When there is a need to prevent situations that defeat competition or restrain trade.
- 5.3. Pursuant to Section 23.4.1.3 of the 2016 revised IRR of RA No.9184, the Bidder shall have an **SLCC that is at least one (1) contract similar to the Project** the value of which, adjusted to current prices using the PSA's CPI, must be at least equivalent to:
- a. **For the procurement of Non-expendable Supplies and Services: The Bidder must have completed a single contract that is similar to this Project, equivalent to at least fifty percent (50%) of the ABC of the lot being bid.**
- 5.4. The Bidders shall comply with the eligibility criteria under Section 23.4.1 of the 2016 IRR of RA No. 9184.

6. Origin of Goods

There is no restriction on the origin of goods other than those prohibited by a decision of the UN Security Council taken under Chapter VII of the Charter of the UN, subject to Domestic Preference requirements under **ITB** Clause 18.

7. Subcontracts

- 7.1. The Bidder may subcontract portions of the Project to the extent allowed by the Procuring Entity as stated herein, but in no case more than twenty percent (20%) of the Project.

The Procuring Entity has prescribed that **Subcontracting is not allowed.**

- 7.2. Subcontracting of any portion of the Project does not relieve the Supplier of any liability or obligation under the Contract. The Supplier will be responsible for the acts, defaults, and negligence of any subcontractor, its agents, servants, or workmen as fully as if these were the Supplier's own acts, defaults, or negligence, or those of its agents, servants, or workmen.



8. Pre-Bid Conference

The Procuring Entity will hold a pre-bid conference for this Project on the specified date and time and through videoconferencing/webcasting as indicated in the **IB**.

9. Clarification and Amendment of Bidding Documents

Prospective bidders may request for clarification on and/or interpretation of any part of the Bidding Documents. Such requests must be in writing and received by the Procuring Entity, either at its given address or through electronic mail indicated in the **IB**, at least ten (10) calendar days before the deadline set for the submission and receipt of Bids.

10. Documents comprising the Bid: Eligibility and Technical Components

- 10.1. The first envelope shall contain the eligibility and technical documents of the Bid as specified in **Section VIII (Checklist of Technical and Financial Documents)**.
- 10.2. The Bidder's SLCC as indicated in **ITB** Clause 5.3 should have been completed within **the last five (5) years** prior to the deadline for the submission and receipt of bids.
- 10.3. If the eligibility requirements or statements, the bids, and all other documents for submission to the BAC are in foreign language other than English, it must be accompanied by a translation in English, which shall be authenticated by the appropriate Philippine foreign service establishment, post, or the equivalent office having jurisdiction over the foreign bidder's affairs in the Philippines. Similar to the required authentication above, for Contracting Parties to the Apostille Convention, only the translated documents shall be authenticated through an apostille pursuant to GPPB Resolution No. 13-2019 dated 23 May 2019. The English translation shall govern, for purposes of interpretation of the bid.

11. Documents comprising the Bid: Financial Component

- 11.1. The second bid envelope shall contain the financial documents for the Bid as specified in **Section VIII (Checklist of Technical and Financial Documents)**.
- 11.2. If the Bidder claims preference as a Domestic Bidder or Domestic Entity, a certification issued by DTI shall be provided by the Bidder in accordance with Section 43.1.3 of the 2016 revised IRR of RA No. 9184.
- 11.3. Any bid exceeding the ABC indicated in the **IB** shall not be accepted.
- 11.4. For Foreign-funded Procurement, a ceiling may be applied to bid prices provided the conditions are met under Section 31.2 of the 2016 revised IRR of RA No. 9184.

12. Bid Prices

- 12.1. Prices indicated on the Price Schedule shall be entered separately in the following manner:
 - a. For Goods offered from within the Procuring Entity's country:
 - i. The price of the Goods quoted EXW (ex-works, ex-factory, ex-warehouse, ex-showroom, or off-the-shelf, as applicable);



- ii. The cost of all customs duties and sales and other taxes already paid or payable;
 - iii. The cost of transportation, insurance, and other costs incidental to delivery of the Goods to their final destination; and
 - iv. The price of other (incidental) services, if any, listed in e.
- b. For Goods offered from abroad:
- i. Unless otherwise stated in the **BDS**, the price of the Goods shall be quoted delivered duty paid (DDP) with the place of destination in the Philippines as specified in the **BDS**. In quoting the price, the Bidder shall be free to use transportation through carriers registered in any eligible country. Similarly, the Bidder may obtain insurance services from any eligible source country.
 - ii. The price of other (incidental) services, if any, as listed in **Section VII (Technical Specifications)**.

13. Bid and Payment Currencies

13.1. For Goods that the Bidder will supply from outside the Philippines, the bid prices may be quoted in the local currency or tradable currency accepted by the BSP at the discretion of the Bidder. However, for purposes of bid evaluation, Bids denominated in foreign currencies, shall be converted to Philippine currency based on the exchange rate as published in the BSP reference rate bulletin on the day of the bid opening.

13.2. Payment of the contract price shall be made in:

- a. **Philippine Pesos.**

14. Bid Security

14.1. The Bidder shall submit a **Bid Securing Declaration¹** or any form of **Bid Security** in the amount indicated in the **BDS**, which shall be not less than the percentage of the ABC in accordance with the schedule in the **BDS**.

14.2. The Bid and bid security shall be **valid for one hundred twenty calendar days from the date of opening of bids**. Any Bid not accompanied by an acceptable bid security shall be rejected by the Procuring Entity as non-responsive.

15. Sealing and Marking of Bids

Each Bidder shall submit one copy (1) of the first and second components of its Bid.

The Procuring Entity may request additional hard copies and/or electronic copies of the Bid. However, failure of the Bidders to comply with the said request shall not be a ground for disqualification.

¹ In the case of Framework Agreement, the undertaking shall refer to entering into contract with the Procuring Entity and furnishing of the performance security or the performance securing declaration within ten (10) calendar days from receipt of Notice to Execute Framework Agreement.



TO	:	THE BIDS AND AWARDS COMMITTEE
		DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
FROM	:	_____
		(Name of Bidder in Capital Letters)
ADDRESS:		_____
		(Address of Bidder in Capital Letters)
PROJECT :		_____
BID REF NO:		_____
		(In Capital Letters, Indicate the Phrase):
LOT NO. :		_____
"DO NOT OPEN BEFORE:		_____

All envelopes shall:

- (a) contain the name of the contract to be bid in capital letters;
- (b) bear the name and address of the Bidder in capital letters;
- (c) be addressed to the Procuring Entity's BAC;
- (d) bear the specific identification of this bidding process indicated in the ITB Clause 102; and bear a warning "DO NOT OPEN BEFORE..." the date and time for the opening of bids, as specified in the IB.

16. Deadline for Submission of Bids

- 16.1. The Bidders shall submit on the specified date and time and either at its physical address as indicated in the **IB**.

17. Opening and Preliminary Examination of Bids

- 17.1. The BAC shall open the Bids in public at the time, on the date, and at the place specified in the **IB**. The Bidders' representatives who are present shall sign a register evidencing their attendance. In case videoconferencing, webcasting or other similar technologies will be used, attendance of participants shall likewise be recorded by the BAC Secretariat.

In case the Bids cannot be opened as scheduled due to justifiable reasons, the rescheduling requirements under Section 29 of the 2016 revised IRR of RA No. 9184 shall prevail.

- 17.2. The preliminary examination of bids shall be governed by Section 30 of the 2016 revised IRR of RA No. 9184.

18. Domestic Preference

- 18.1. The Procuring Entity will grant a margin of preference for the purpose of comparison of Bids in accordance with Section 43.1.2 of the 2016 revised IRR of RA No. 9184.

19. Detailed Evaluation and Comparison of Bids

- 19.1. The Procuring BAC shall immediately conduct a detailed evaluation of all Bids rated "*passed*," using non-discretionary pass/fail criteria. The BAC shall consider the conditions in the evaluation of Bids under Section 32.2 of the 2016 revised IRR of RA No. 9184.



- 19.2. If the Project allows partial bids, bidders may submit a proposal on any of the lots or items, and evaluation will be undertaken on a per lot or item basis, as the case maybe. In this case, the Bid Security as required by **ITB** Clause 15 shall be submitted for each lot or item separately.
- 19.3. The descriptions of the lots or items shall be indicated in **Section VII (Technical Specifications)**, although the ABCs of these lots or items are indicated in the **BDS** for purposes of the NFCC computation pursuant to Section 23.4.2.6 of the 2016 revised IRR of RA No. 9184. The NFCC must be sufficient for the total of the ABCs for all the lots or items participated in by the prospective Bidder.
- 19.4. The Project shall be awarded as follows:
- Option 1 – One Project having several items that shall be awarded as one contract.
- 19.5. Except for bidders submitting a committed Line of Credit from a Universal or Commercial Bank in lieu of its NFCC computation, all Bids must include the NFCC computation pursuant to Section 23.4.1.4 of the 2016 revised IRR of RA No. 9184, which must be sufficient for the total of the ABCs for all the lots or items participated in by the prospective Bidder. For bidders submitting the committed Line of Credit, it must be at least equal to ten percent (10%) of the ABCs for all the lots or items participated in by the prospective Bidder.

20. Post-Qualification

- 20.1. Within a non-extendible period of **five (5) calendar days** from receipt by the Bidder of the notice from the BAC that it submitted the Lowest/Single Calculated Bid, the Bidder shall submit **its latest income and business tax returns filed and paid through the BIR Electronic Filing and Payment System (eFPS) and other appropriate licenses and permits required by law and stated in the BDS.**

21. Signing of the Contract

- 21.1. The documents required in Section 37.2 of the 2016 revised IRR of RA No. 9184 shall form part of the Contract. Additional Contract documents are indicated in the **BDS.**



Section III. Bid Data Sheet



Bid Data Sheet

ITB Clause																																	
5.3	For this purpose, contracts similar to the Project shall be: <ol style="list-style-type: none"> a. <u>“Bioremediation Solution for Water Quality Improvement”</u> and b. Completed <i>within the last five (5) years</i> prior to the deadline for the submission and receipt of bids. 																																
7.1	<i>Subcontracting is not allowed.</i>																																
12	The price of the Goods shall be quoted DDP <i>Philippines</i> or the applicable International Commercial Terms (INCOTERMS) for this Project.																																
14.1	<p>The bid security shall be in any of the following forms issued in favor of the Department of Environment and Natural Resources (DENR):</p> <table border="1"> <thead> <tr> <th>Lot No.</th> <th>Description</th> <th>Project ABC (P)</th> <th>Bid Security: Cash, Cashier's/ Manager's Check, Bank Draft / Guarantee, Irrevocable Letter of Credit (2%) (P)</th> <th>Bid Security: Surety Bond (5%) (P)</th> <th>Bid Securing Declaration</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Estero De Magdalena</td> <td>900,000.00</td> <td>18,000.00</td> <td>45,000.00</td> <td rowspan="5">No required Amount</td> </tr> <tr> <td>2</td> <td>Estero De Paco</td> <td>890,000.00</td> <td>17,800.00</td> <td>44,500.00</td> </tr> <tr> <td>3</td> <td>Estero De Pandacan</td> <td>1,000,000.00</td> <td>20,000.00</td> <td>50,000.00</td> </tr> <tr> <td>4</td> <td>Estero De Kabulusan</td> <td>980,000.00</td> <td>19,600.00</td> <td>49,000.00</td> </tr> <tr> <td colspan="2">TOTAL</td> <td>3,770,000.00</td> <td>75,400.00</td> <td>188,500.00</td> </tr> </tbody> </table>	Lot No.	Description	Project ABC (P)	Bid Security: Cash, Cashier's/ Manager's Check, Bank Draft / Guarantee, Irrevocable Letter of Credit (2%) (P)	Bid Security: Surety Bond (5%) (P)	Bid Securing Declaration	1	Estero De Magdalena	900,000.00	18,000.00	45,000.00	No required Amount	2	Estero De Paco	890,000.00	17,800.00	44,500.00	3	Estero De Pandacan	1,000,000.00	20,000.00	50,000.00	4	Estero De Kabulusan	980,000.00	19,600.00	49,000.00	TOTAL		3,770,000.00	75,400.00	188,500.00
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4	Estero De Kabulusan	980,000.00	19,600.00	49,000.00																													
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4	Estero de Kabulusan	980,000.00																															
20.2	<p>Post Qualification: Within a non-extendible period of five (5) calendar days from receipt by the supplier of the Notice from the BAC that the supplier has the Single/Lowest Calculated Bid (S/LCB), the Supplier shall submit and/or present the following requirements for post qualification:</p> <ol style="list-style-type: none"> 1. Present original copy and submit certified true copy of the following: <ol style="list-style-type: none"> a) Registration certificate from SEC, Department of Trade and Industry (DTI) for sole proprietorship, or CDA for cooperatives; b) Valid and current Business/Mayor's Permit issued to bidder by the city or municipality where the principal place of business of the bidder is located or the equivalent document for Exclusive Economic Zones or Areas; 																																



- c) Valid and current Tax Clearance per E.O. 398, series of 2005, as finally reviewed and approved by the Bureau of Internal Revenue (BIR);
- d) Audited Financial Statements (AFS) for CY 2021 received (with stamped receipt or with attached copy of acknowledgement thru email) by the Bureau of Internal Revenue (BIR) or its duly accredited and authorized institutions dated CY 2022;
- e) **2021 Annual Income Tax Return and Latest Income Tax Returns per Revenue Regulations 3-2005**; Tax returns filed through the Electronic Filing and Payments System (EFPS). The latest income and business tax returns are those within the last six months preceding the date of bid submission **(including copy of VAT returns and corresponding payments for the last 6 months)**;
- f) POs or Contracts for all Ongoing Contracts as listed per submitted Annex I with corresponding contact details (contact person, contact number & e-mail address);
- g) Result of water analysis from DENR accredited laboratory of past completed projects or product testing (i.e. before and after treatment/application of Bioremediation Solution);
- h) Valid and current International Organization for Standardization (ISO) Certifications as follows:
 - i. ISO 9001:2015 (Quality Management System)
 - ii. ISO 14001:2015 (Environmental Management System)
- i) Certificate of Performance Evaluation (Annex VII) or equivalent document with a rating of at least Satisfactory issued by the Largest Contract/s Client/s of the bidder per submitted Annex I-A. The certification/document must indicate that the evaluation was based on the bidder's performance on timely delivery, compliance to specifications, warranty and after sales service.

(In case of Joint Venture between local companies, both partners must present/submit the Class "A" eligibility documents. In case of foreign partner, item "1.A.i" is not applicable, but must submit any equivalent document.)

2. Submit original copy of the following:

- a) Company Profile (per **Annex VIII**). Company printed brochure may be included;
- b) Vicinity map/location of the business;



	<p>c) Certification stating that the product is environmentally safe (Material/Product Safety Data Sheet);</p> <p>d) List of at least one (1) office/area, can be a leased warehouse or stockroom where the bioremediation solution set will be prepared or Certification stating that the supplier will transport the prepared solution directly from their manufacturing plant to the following identified application points:</p> <table border="1" data-bbox="541 517 1131 692"> <thead> <tr> <th>Lot No.</th> <th>Location</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Estero de Magdalena</td> </tr> <tr> <td>2</td> <td>Estero de Paco</td> </tr> <tr> <td>3</td> <td>Estero de Pandacan</td> </tr> <tr> <td>4</td> <td>Estero de Kabulusan</td> </tr> </tbody> </table> <p>e) Brochure (original or internet download/Technical Data Sheet or equivalent) of the items/services being offered showing compliance to the technical specifications. (If not in English, please refer to Section 23.2 of the 2016 Revised IRR of RA 9184) <i>(In case of Joint Venture, both partners must present/submit items a and b)</i></p> <p>3. Present original copy of the End-User's Acceptance or Official Receipt/Sales Invoice/Collection Receipt relative to Single Largest Completed Contract per submitted Annex I-A.</p> <p>4. Submit certified true copies of the Eligibility, Technical and Financial Documents in two (2) sets, marked as "COPY 1" and "COPY 2".</p> <p>5. Submit digital/scanned copy of Eligibility, Technical, Financial and Post-qualification documents stored in Universal Serial Bus (USB) flash drive.</p> <p>Failure of the supplier, declared as Single/Lowest Calculated Bid (S/LCB), to duly submit the above requirements or a finding against the veracity of such shall be ground for forfeiture of the bid security and disqualify the Supplier for award.</p>	Lot No.	Location	1	Estero de Magdalena	2	Estero de Paco	3	Estero de Pandacan	4	Estero de Kabulusan
Lot No.	Location										
1	Estero de Magdalena										
2	Estero de Paco										
3	Estero de Pandacan										
4	Estero de Kabulusan										
21.2	Within ten (10) calendar days from receipt of Notice of Award, successful Bidder shall post the required performance security, sign and date the contract and return it to DENR.										



Section IV. General Conditions of Contract



1. Scope of Contract

This Contract shall include all such items, although not specifically mentioned, that can be reasonably inferred as being required for its completion as if such items were expressly mentioned herein. All the provisions of RA No. 9184 and its 2016 revised IRR, including the Generic Procurement Manual, and associated issuances, constitute the primary source for the terms and conditions of the Contract, and thus, applicable in contract implementation. Herein clauses shall serve as the secondary source for the terms and conditions of the Contract.

This is without prejudice to Sections 74.1 and 74.2 of the 2016 revised IRR of RA No. 9184 allowing the GPPB to amend the IRR, which shall be applied to all procurement activities, the advertisement, posting, or invitation of which were issued after the effectivity of the said amendment.

Additional requirements for the completion of this Contract shall be provided in the **Special Conditions of Contract (SCC)**.

2. Advance Payment and Terms of Payment

2.1. Advance payment of the contract amount is provided under Annex "D" of the revised 2016 IRR of RA No. 9184.

2.2. The Procuring Entity is allowed to determine the terms of payment on the partial or staggered delivery of the Goods procured, provided such partial payment shall correspond to the value of the goods delivered and accepted in accordance with prevailing accounting and auditing rules and regulations. The terms of payment are indicated in the **SCC**.

3. Performance Security

Within ten (10) calendar days from receipt of the Notice of Award by the Bidder from the Procuring Entity but in no case later than prior to the signing of the Contract by both parties, the successful Bidder shall furnish the performance security in any of the forms prescribed in Section 39 of the 2016 revised IRR of RA No. 9184

4. Inspection and Tests

The Procuring Entity or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Project specifications at no extra cost to the Procuring Entity in accordance with the Generic Procurement Manual. In addition to tests in the **SCC, Section VI (Technical Specifications)** shall specify what inspections and/or tests the Procuring Entity requires, and where they are to be conducted. The Procuring Entity shall notify the Supplier in writing, in a timely manner, of the identity of any representatives retained for these purposes.

All reasonable facilities and assistance for the inspection and testing of Goods, including access to drawings and production data, shall be provided by the Supplier to the authorized inspectors at no charge to the Procuring Entity.



5. Warranty

- 6.1. In order to assure that manufacturing defects shall be corrected by the Supplier, a warranty shall be required from the Supplier as provided under Section 62.1 of the 2016 revised IRR of RA No. 9184.
- 6.2. The Procuring Entity shall promptly notify the Supplier in writing of any claims arising under this warranty. Upon receipt of such notice, the Supplier shall, repair or replace the defective Goods or parts thereof without cost to the Procuring Entity, pursuant to the Generic Procurement Manual.

6. Liability of the Supplier

The Supplier's liability under this Contract shall be as provided by the laws of the Republic of the Philippines.

If the Supplier is a joint venture, all partners to the joint venture shall be jointly and severally liable to the Procuring Entity.



Section V. Special Conditions of Contract



Special Conditions of Contract

GCC Clause	
1	<p>Delivery and Documents – For purposes of the Contract, “EXW,” “FOB,” “FCA,” “CIF,” “CIP,” “DDP” and other trade terms used to describe the obligations of the parties shall have the meanings assigned to them by the current edition of INCOTERMS published by the International Chamber of Commerce, Paris. The Delivery terms of this Contract shall be as follows:</p> <p>The delivery terms applicable to this Contract are delivered <i>in the Philippines</i>. Risk and title will pass from the Supplier to the Procuring Entity upon receipt and final acceptance of the Goods at their final destination.</p> <p>Delivery of the Goods shall be made by the Supplier in accordance with the terms specified in Section VI (Schedule of Requirements).</p> <hr/> <p>For purposes of this Clause the Procuring Entity’s Representative at the Project Site is: Dr. Joan A. Lagunda, MNSA Assistant Secretary for Administration and Legislative Affairs; and Concurrent Executive Director of Pasig River Coordinating and Management Office Department of Environment and Natural Resources Tel. No.: 8926-2675</p> <hr/> <p>Incidental Services – The Supplier is required to provide all of the following services, including additional services, if any, specified in Section VI. Schedule of Requirements:</p> <ol style="list-style-type: none"> a. performance or supervision of on-site assembly and/or start-up of the supplied Goods; b. furnishing of tools required for assembly and/or maintenance of the supplied Goods; c. furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied Goods; d. performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract; and <p>The Contract price for the Goods shall include the prices charged by the Supplier for incidental services and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services.</p>

**Packaging –**

The Supplier shall provide such packaging of the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in this Contract. The packaging shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packaging case size and weights shall take into consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit.

The packaging, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the Contract, including additional requirements, if any, specified below, and in any subsequent instructions ordered by the Procuring Entity.

The outer packaging must be clearly marked on at least four (4) sides as follows:

Name of the Procuring Entity
Name of the Supplier
Contract Description
Final Destination
Gross weight
Any special lifting instructions
Any special handling instructions
Any relevant HAZCHEM classifications

A packaging list identifying the contents and quantities of the package is to be placed on an accessible point of the outer packaging if practical. If not practical the packaging list is to be placed inside the outer packaging but outside the secondary packaging.

Transportation –

Where the Supplier is required under Contract to deliver the Goods CIF, CIP, or DDP, transport of the Goods to the port of destination or such other named place of destination in the Philippines, as shall be specified in this Contract, shall be arranged and paid for by the Supplier, and the cost thereof shall be included in the Contract Price.

Where the Supplier is required under this Contract to transport the Goods to a specified place of destination within the Philippines, defined as the Project Site, transport to such place of destination in the Philippines, including insurance and storage, as shall be specified in this Contract, shall be arranged by the Supplier, and related costs shall be included in the contract price.



	<p>Where the Supplier is required under Contract to deliver the Goods CIF, CIP or DDP, Goods are to be transported on carriers of Philippine registry. In the event that no carrier of Philippine registry is available, Goods may be shipped by a carrier which is not of Philippine registry provided that the Supplier obtains and presents to the Procuring Entity certification to this effect from the nearest Philippine consulate to the port of dispatch. In the event that carriers of Philippine registry are available but their schedule delays the Supplier in its performance of this Contract the period from when the Goods were first ready for shipment and the actual date of shipment the period of delay will be considered force majeure.</p> <p>The Procuring Entity accepts no liability for the damage of Goods during transit other than those prescribed by INCOTERMS for DDP deliveries. In the case of Goods supplied from within the Philippines or supplied by domestic Suppliers risk and title will not be deemed to have passed to the Procuring Entity until their receipt and final acceptance at the final destination.</p> <p>Intellectual Property Rights – The Supplier shall indemnify the Procuring Entity against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the Goods or any part thereof.</p>
2.2	Payment shall be made in accordance with Section VI. Schedule of Requirements and upon completion of the contract and submission of complete documentary requirements in accordance with prevailing accounting and auditing rules and regulations.
4	Applicable inspection and testing shall be conducted by the Inspection and Pre-Acceptance Committee of the Department.



Section VI. Schedule of Requirements

**PLEASE USE THIS BID FORM. DO NOT RETYPE OR ALTER****Section VI-A
(page 1 of 12)****Schedule of Requirements****Supply, Delivery and Application of Bioremediation Solution for the Water Quality Improvement
Lot No. 1: Estero de Magdalena (Phase III)**

Instruction to Bidders: **Please fill up the form accordingly and sign the Bidder's Undertaking. Failure to conform will result in a rating of "FAILED".**

A. TERMS OF REFERENCE as of 02 September 2022

Republic of the Philippines
Department of Environment and Natural Resources
Visayas Avenue, Diliman, Quezon City, 1100
Trunkline (632) 929-66-26 • 929-6628 • 929-6635 • 929-4028
Voice-Over-Internet-Protocol (VOIP) Trunkline (632) 755-3330

**TERMS OF REFERENCE
as of 02 September 2022****Procurement and Application of Bioremediation Solution for the Water
Quality Improvement of Estero de Magdalena (Phase 3)****I. Rationale**

The Pasig River Coordinating and Management Office (PRCMO) was created under the Department of Environment and Natural Resources Central Office (DENR-CO) through Department Administrative Order No. 2020-02 whose main objective is to ensure continuity of the plans and programs of the rehabilitation and development of Pasig River in line with the Manila Bay Rehabilitation Program.

As part of the main functions of PRCMO which is to adopt water quality improvement strategies, interventions, and technologies that aim to improve the Pasig River System and its environs, conventionally used technologies such as Bioremediation are continuously explored.

Bioremediation is an emerging technology in river pollution control that facilitates the removal or neutralization of pollutants from a contaminated site. This intervention has different types such as *Microbial Bioremediation* which involves microorganisms to degrade pollutants and use them as food source, *Phytoremediation* which utilizes plants to absorb contaminants, and *Mycoremediation* which uses fungi's digestive enzymes to break down impurities. For this project, *Microbial Bioremediation* was chosen through an in-situ application of a bioremediation solution.

Microbial Bioremediation stimulates the growth of certain beneficial microbes thru microbial metabolism. This process converts contaminants into food and energy. Further, this technology can be directly and easily applied to polluted sites; hence, no circumstances could lead to secondary pollution or pollutant movement. Also, it does not pose any threat to the surrounding communities given that the applied microbes are organic and not harmful to humans and aquatic species. Lastly, it does not require intensive labor and energy; thus, considered economical.

In December 2021, a Phase 2 *Microbial Bioremediation* project was implemented in Estero de Magdalena to treat its heavily polluted waters reflecting alarming levels of Fecal Coliform count at 12.9 Million Most Probable Number (MPN)/100mL, Biochemical Oxygen Demand (BOD) level reaching

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59.50 mg/L, Phosphate concentration at 1.79 mg/L, and level of Ammonia at 4.25 mg/L, all exceeding their respective Class C guidelines.

Estero de Magdalena is one of the critical Pasig River tributaries in Metro Manila known for its odorous waters and poor quality due to easement encroachments and informal settler families (ISFs), indiscriminate dumping of solid wastes, and untreated wastewater discharges. During the implementation of the Phase 2 Microbial Bioremediation Project in the area, the presence of floating solid wastes and rampant wastewater discharge from ISFs persisted. Nonetheless, immediate improvement in terms of water odor was observed. Further, a downward trend of Fecal Coliform count and consistent passing levels of Total Suspended Solids and Nitrate were significantly noted.

To continuously treat and intensify the rehabilitation efforts in Estero de Magdalena, high concentration levels and a consistent application frequency of bioremediation solution is aimed to be performed for a more efficient and sustainable ambient water treatment measure.

With that, the project intends to further improve the water quality of Estero de Magdalena, hereinafter referred to as the project area, specifically in terms of reduction of Biochemical Oxygen Demand (BOD), Dissolved Oxygen (DO), Fecal coliform, Nitrates, Phosphates, Total Suspended Solids, and Ammonia; as well as further reduce the foul odor emitted from the waterway using Microbial Bioremediation technology.

II. Approved Budget for the Contract (ABC)

The total ABC for the project is **NINE HUNDRED THOUSAND PESOS ONLY (Php 900,000.00)** inclusive of all applicable government taxes and service charges.

III. Scope of Work

The winning bidder or supplier shall supply, prepare, deliver, and apply the bioremediation solution at the identified application sites of the project area as well as submit two (2) technical reports, as defined herein, which shall include, but not limited to the following:

- A. Supply, which entails the provision of the desired bioremediation solution sets as indicated in Section IV, B. Technical Requirements;
- B. Prepare the desired set/s of bioremediation solutions ready for application based on the Application Timeline, which includes the disposition of all necessary and relevant equipment, manpower, and other resources necessary in the preparation and dilution of the bioremediation;



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**Section VI-A
(page 3 of 12)**

- C. Deliver and apply the prepared bioremediation solution, which includes the disposition of all necessary and relevant equipment, manpower, and other resources;
- D. Prepare and submit two (2) technical reports (i.e. initial and final), which contains the minimum information stated in Section IV, E. Technical Report;
- E. The winning Supplier shall be responsible for the acquisition permits and other documents on the transport of the bioremediation solution, if necessary.

IV. Project Requirements

A. Project Area (Overview of Estero de Magdalena)

1) Characteristics

Estero de Magdalena which lies adjacent to Estero de San Lazaro is a 1,307 meters long, 6.6 meters wide and 0.92 meters deep waterway as of 2021 monitoring located at the North-West portion of Manila within its Third Congressional District. It directly impacts 20 barangays bordered primarily by residential, commercial, industrial, and institutional establishments. Most of the solid and liquid wastes generated by these institutions are allegedly dumped and discharged directly into the river without any treatment. Figure 1 shows the location map of Estero de Magdalena.

2) Location map

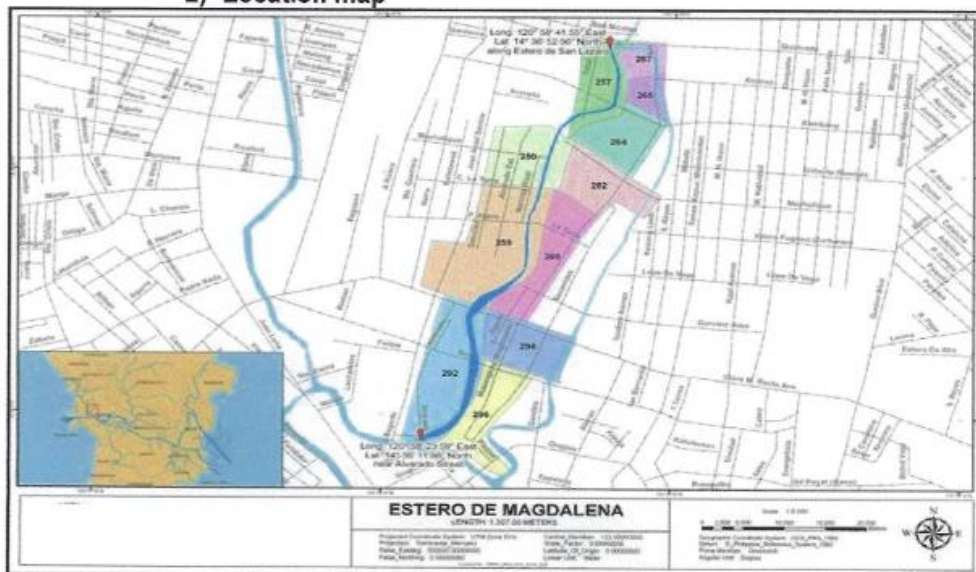


Figure 1. Location Map of Estero de Magdalena

**PLEASE USE THIS BID FORM. DO NOT RETYPE OR ALTER****Section VI-A
(page 4 of 12)****3) Water Quality**

Based on the average endline laboratory results from the C.Y. 2021 sampling proper, five (5) out of seven (7) monitored water quality parameters failed the Class C guidelines stipulated in the DENR Administrative Order (DAO) 2016-08 as shown in the table below:

Table 1. Endline Water Quality Data of Estero de Magdalena Phase 2

Parameters	DAO No. 2016-08 Class C Guideline	Endline Water Quality Laboratory Results	Remarks
Fecal Coliform (FC)	200 MPN/100 mL	2,250,000 MPN/100mL	FAILED
Biochemical Oxygen Demand (BOD)	7 mg/L	56.50 mg/L	FAILED
Dissolved Oxygen (DO)	5 mg/L (min.)	0.02 mg/L	FAILED
Total Suspended Solids (TSS)	80 mg/L	24.50 mg/L	PASSED
Nitrate	7 mg/L	0.018 mg/L	PASSED
Phosphate	0.5 mg/L	1.95 mg/L	FAILED
Ammonia	0.05 mg/L	8.18 mg/L	FAILED

Data gathered during the Phase 2 implementation in Estero de Magdalena shows that Fecal coliform resulted in a high percentage reduction at 32.53% indicating a promising improvement in terms of the efficacy of Bioremediation Solution in degrading unwanted microbes on polluted waters. Further, although Nitrates and TSS have increased over time, their concentration is still considered safe. BOD, Phosphate, and Ammonia, on the other hand, also reflected high concentration levels from the obtained data which may indicate continuous pollution loading through dumping of solid wastes and persistent liquid waste discharges in the area. Shown in the table below is the trend of improvement in Estero de Magdalena in relation to the target reduction during the Phase 2 implementation of the project.

Table 2. Improvement Trend in relation to the Target Reduction of Estero de Magdalena Phase 2

Parameters	Target % Reduction (Phase 1)	Actual % Reduction	Remarks
Fecal Coliform (FC)	35%	- 32.53%	• Downward trend yet failing the DAO 2016-08 guideline
Biochemical Oxygen Demand (BOD)	12%	+ 44.76%	• Upward trend failing to meet the target reduction and the DAO 2016-08 guideline
Total Suspended Solids (TSS)	20%	- 11.29%	• Downward trend passing the DAO 2016-08 guideline



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Nitrate	20%	+ 1891.67%	• Upward trend yet consistently passing the DAO 2016-08 guideline
Phosphate	5%	+ 17.41%	• Upward trend failing the DAO 2016-08 guideline
Ammonia	12%	+ 319.24%	• Upward trend failing the DAO 2016-08 guideline

Note: Green means Favorable, Red means Unfavorable

4) Application Site

An ocular inspection was conducted on January 19, 2022 in Estero de Magdalena to re-survey the area, to identify application points in the project site, the following criteria were followed:

1. One (1) station in the upstream portion, one (1) in midstream, and another one (1) at the downstream portion of the waterway for the bioremediation solution to be well dispersed along the waterway;
2. Access to the waterway;
3. Parking requirement for the delivery truck;
4. Vehicle traffic volume; and
5. Minimal presence of solid waste and informal settler families (ISFs).

In this regard, four (4) application points were identified in Estero de Magdalena namely Tayuman St. (upstream), Bambang St (mid-upstream), La Torre (mid-downstream), and C.M. Recto (downstream) which was also an application points during the Phase 2 project of Estero de Magdalena as illustrated in Figure 2.

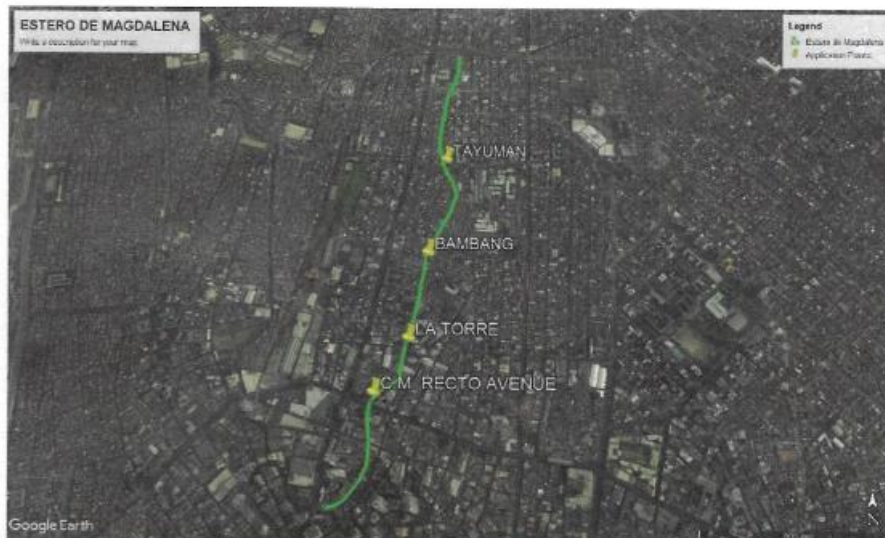


Figure 2. Identified Application Points in Estero de Magdalena

**PLEASE USE THIS BID FORM. DO NOT RETYPE OR ALTER****Section VI-A
(page 6 of 12)****B. Technical Requirements**

1. The technical requirements and evaluation parameters are as follows:

PARAMETERS	EVALUATION OF PARAMETER
1. Composition of Solution	<ul style="list-style-type: none"> Contains trillions of beneficial microorganisms specifically: Lactobacillus sp., Bacillus sp., Azospirillum sp., Saccharomyces sp., Bacterial count, Yeast count, etc. Contains at least concentrated enzymes
2. Preparation of One (1) Solution Set	<ul style="list-style-type: none"> One (1) set of Bioremediation Solution shall contain at least 2 kilograms of Bioremediation Solution powder which will be diluted to approximately 40 liters of unchlorinated water
3. Preparation of Solution to be Applied per day	<ul style="list-style-type: none"> The desired number of sets per day will be combined and further diluted to make a bioremediation solution (i.e. On Day 1 of Week 1, at least 8 sets of bioremediation solution will be applied in different application points)

C. Application Timeline

The desired numbers of Bioremediation Solution sets to be applied were calculated based on the volume and flow rate of water as well as its water quality. Based on the approximate volume of 8,000 cubic meters and average flow rate of 0.185 m/s of Estero de Magdalena, the desired numbers of sets to be applied per day are as follows:

MONTH 1

57 SETS	MON	TUE	WED	THU	FRI	Number of Sets of Bio-Solution per week
Number of Sets of Bio-Solution per day	8 sets					8 sets
	7 sets					7 sets
	7 sets					7 sets
	7 sets					7 sets



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MONTH 2

	MON	TUE	WED	THU	FRI	Number of Sets of Bio-Solution per week
Number of Sets of Bio-Solution per day	7 sets					7 sets
	7 sets					7 sets
	7 sets					7 sets
	7 sets					7 sets

The desired number of sets per day will be combined and further diluted to make at least 40 liters of bioremediation solution which will be applied in different application points of Estero de Magdalena.

D. Testing

To assess the effectiveness of the bioremediation solution in treating Estero de Magdalena, reduction of the following water quality parameters shall be monitored:

1. Fecal Coliform (FC)
2. Biochemical Oxygen Demand (BOD)
3. Total Suspended Solids (TSS)
4. Nitrate
5. Phosphate
6. Ammonia

The above-mentioned parameters were based on the previously monitored parameters from the 2021 implemented Phase 2 project.

Further, the table below shows the target percentage reduction for each water quality parameter:

Parameters	Target % Reduction
Fecal Coliform (FC)	30%
Biochemical Oxygen Demand (BOD)	15%
Total Suspended Solids (TSS)	20%
Nitrate	20%
Phosphate	7%
Ammonia	25%

The target percentage reduction was based on the results of the Phase 2 application of bioremediation solution in Estero de Magdalena last CY 2021.



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Water sampling before the first application of bioremediation solution in Estero de Magdalena shall be conducted to serve as a reference point in calculating the percentage reduction per parameter. Meanwhile, the identified application points presented in Figure 2 shall also serve as the water quality monitoring stations. This is to determine the extent of the applied bioremediation solution as well as to identify other external factors that affect the area. Presented in Figure 3 is the water quality monitoring stations in Estero de Magdalena.

To add, a series of water samplings shall be conducted weekly specifically before the first day of application per week to measure the effectiveness of the product in treating Estero de Magdalena. Moreover, another water sampling shall also be performed one (1) week and one (1) month after the last day of application for further monitoring and evaluation of the project.

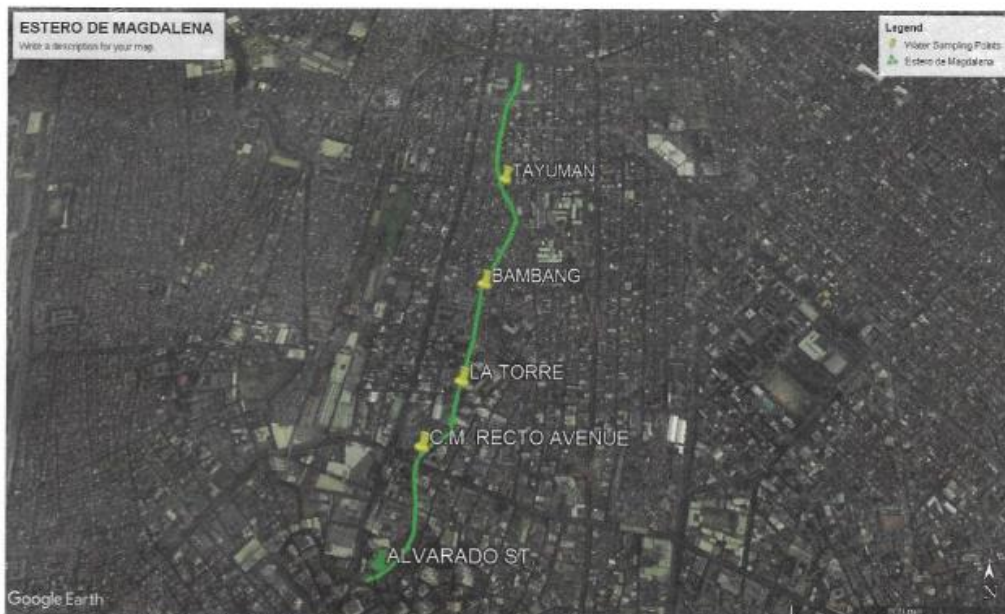


Figure 3. Water Quality Monitoring Stations in Estero de Magdalena

E. Technical Report

For more efficient and sustainable project implementation, an Initial Report shall be provided by the Supplier with the following proposed chapters:

1. Background
2. Product Description and Mechanism
3. Target percentage Reduction
4. Methodology
 - a. Application Dosage (i.e. calculation of the required volume of solution)

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(page 9 of 12)**

- b. Application Timeline
- c. Sampling Frequency
5. Conclusion and Recommendation
 - a. Comparative Analysis from the Phase 2 of the project

This shall serve as an operational guideline if the project will be replicated in other priority tributaries.

Meanwhile, a Final Report containing an Assessment and/or Evaluation capturing the Pre-Application, Application, and Post-Application Phase, Interpretation of Results, and Technical Recommendations for the improvement of the project shall also be submitted by the Supplier. This report, on the other hand, shall serve as a counter-part of the study conducted by DENR-PRCMO.

F. Completion Period

Delivery and application of the first (1st) batch of the bioremediation solution set shall be within fifteen (15) calendar days from receipt of Notice to Proceed (NTP). The delivery and application of the remaining seven (7) batches of solution sets must be completed within two (2) months from the delivery and application of the first (1st) batch of the solution set. Consequently, application timeline indicated in Section IV-C of the Project Requirements must be strictly followed.

V. Other Requirements

1. The Supplier shall submit a document stating that the product complies with the required technical specifications.
2. The product should have been tested and proven effective in treating wastewater. Results of analysis from DENR-Accredited Laboratory of past completed projects or product testing (i.e. before and after treatment/application of bioremediation solution) shall be presented.
3. The Supplier shall submit a certification stating that the product is environmentally safe (Material/Product Safety Data Sheet).
4. To ensure that the processes and procedures of the supplier has the quality, efficiency, consistency and safety with regards to the standards set forth by the International Organization for Standardization (ISO). The supplier shall submit the following ISO Certifications:
 - a. ISO 9001:2015 (Quality Management System)
 - b. ISO 14001:2015 (Environmental Management System)
5. The Supplier shall comply with the delivery schedule specified in the application timeline. Moreover, upon the receipt of NTP by the Supplier, the End User will send a formal letter indicating the dates of application of the project

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(page 10 of 12)**

6. The Supplier may opt to lease a warehouse or stockroom where the bioremediation solution set will be prepared, OR the supplier may transport the prepared solution directly from their manufacturing plant to the identified application points in Estero de Magdalena. Further, the product must be examined by the DENR Inspection Committee and the PRCMO representatives before application. Figure 2 is the map of the application points for reference.
7. Delivery fee and other applicable fees (i.e. energy cost for equipment) shall be included in the unit cost of the product.
8. For the assessment of the product efficiency and technical report requirements, joint-sampling between DENR-PRCMO and the Supplier shall be done to ensure the integrity of samples of both parties. The Supplier shall shoulder the expenses incurred for the laboratory analysis of their collected samples. Further, laboratory analysis of collected water samples shall be conducted on a Department of Environment and Natural Resources (DENR) recognized and accredited laboratory. In this regard, the Supplier shall also submit a copy of the certificate of the laboratory as a DENR-recognized laboratory as an attachment to the Final Report.

VI. Duties and Responsibilities of DENR-PRCMO

1. Duly assigned PRCMO-WQWMD personnel shall coordinate with barangays along Estero de Magdalena before the application of the bioremediation solution.
2. Duly assigned PRCMO-WQWMD personnel shall monitor and assist the Supplier in the application of the bioremediation solution in Estero de Magdalena.
3. Duly assigned PRCMO-WQWMD personnel shall conduct water quality monitoring activities to assess the effectiveness of the product in treating Estero de Magdalena.

VII. Terms of Payment

Payment shall be made based on the following:

1. Payment of 35% of total project cost shall be made after 50% delivery and application of desired number of bioremediation solution set, the issuance of the Certificate of Inspection and Acceptance by the DENR and the submission of Inspection Report by the supplier which shall include the following:
 - A. Background;
 - B. Product Description and Mechanism;
 - C. Target percentage reduction; and
 - D. Methodology indicating the application scheme specifically,

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(page 11 of 12)**

- a. Water Quality Monitoring Stations and Application Points
 - b. Application Timeline and Dosage
 - c. Sampling Frequency
2. Payment of 50% of total project cost shall be made after 100% completion of delivery and application of desired number of bioremediation solution set, the issuance of the Certificate of Inspection and Acceptance by the DENR, and the submission of Final Report by the supplier which contains the following:
- A. Summary of activities conducted in the implementation of the project;
 - B. Manual or procedural guidelines;
 - C. Technical analysis on Data and Results garnered in the Pre-Application Phase, Application Phase, and Post-Application Phase of the project and technical discussion of the Conclusion;
 - D. Results of Analysis (from DENR-recognized laboratory) including Certification of Laboratory Recognition for Water Analysis from DENR – EMB; and
 - E. Recommendations on issues encountered during implementation of the project and other areas for improvement.
3. The remaining 15% of the total project cost shall only be paid once the 30% fecal coliform reduction target is met. In case, additional application of bioremediation solution is needed in order to meet the 30% average reduction in fecal coliform, this shall be at no additional cost to the proponent.

Prepared by:

MA. RAISAH AVERIEL P. BALMES
Engineer IV

Reviewed by:

ANNE MARIE P. NILLES, EnP, MAURP
Chief Environmental Management Specialist

Approved by:

DR. JOAN A. LAGUNDA, MNSA
Assistant Secretary for Administration and Legislative Affairs; and
Concurrent OIC Executive Director of Pasig River Coordinating and Management Office



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**Section VI-A
(page 12 of 12)**

B. Other Requirements

1. Bidder has no overdue deliveries or unperformed services intended for DENR.
2. Bidder did not participate as a consultant in the preparation of the design or technical specification of the GOODS/SERVICES subject of the bid.

BIDDER'S UNDERTAKING

I/We, the undersigned bidder, having examined the Bidding Documents including Bid Bulletins, as applicable, hereby BID to (supply/deliver/perform/comply) the above Terms of Reference

I/We undertake, if our bid is accepted, to deliver the goods/services in accordance with the terms and conditions contained in the bid documents, including the posting of the required performance security within ten (10) calendar days from receipt of the Notice of Award.

Until a formal contract/order confirmation is prepared and signed, this Bid is binding on us.

Name of Company (in print)

Signature of Company Authorized Representative

Name & Designation (in print)

Date

**PLEASE USE THIS BID FORM. DO NOT RETYPE OR ALTER****Section VI-B
(page 1 of 13)****Schedule of Requirements****Supply, Delivery and Application of Bioremediation Solution for the Water Quality Improvement
Lot No. 2: Estero de Paco (Phase II)**

Instruction to Bidders: **Please fill up the form accordingly and sign the Bidder's Undertaking. Failure to conform will result in a rating of "FAILED".**

B. TERMS OF REFERENCE as of 02 September 2022

Republic of the Philippines
Department of Environment and Natural Resources
Visayas Avenue, Diliman, Quezon City, 1100
Trunkline (632) 929-66-26 • 929-6628 • 929-6635 • 929-4028
Voice-Over-Internet-Protocol (VOIP) Trunkline (632) 755-3330

TERMS OF REFERENCEas of **02 September 2022****Procurement and Application of Bioremediation Solution for the Water
Quality Improvement of Estero de Paco (Phase 2)****I. Rationale**

The Pasig River Coordinating and Management Office (PRCMO) was created under the Department of Environment and Natural Resources Central Office (DENR-CO) through Department Administrative Order No. 2020-02 whose main objective is to ensure continuity of the plans and programs of the rehabilitation and development of Pasig River in line with the Manila Bay Rehabilitation Program.

As part of the main functions of PRCMO which is to adopt water quality improvement strategies, interventions, and technologies that aim to improve the Pasig River System and its environs, conventionally used technologies such as Bioremediation are continuously explored.

Bioremediation is an emerging technology in river pollution control that facilitates the removal or neutralization of pollutants from a contaminated site. This intervention has different types such as *Microbial Bioremediation* which involves microorganisms to degrade pollutants and use them as food source, *Phytoremediation* which utilizes plants to absorb contaminants, and *Mycoremediation* which uses fungi's digestive enzymes to break down impurities. For this project, *Microbial Bioremediation* was chosen through an in-situ application of a bioremediation solution.

Microbial Bioremediation stimulates the growth of certain beneficial microbes thru microbial metabolism. This process converts contaminants into food and energy. Further, this technology can be directly and easily applied to polluted sites; hence, no circumstances could lead to secondary pollution or pollutant movement. Also, it does not pose any threat to the surrounding communities given that the applied microbes are organic and not harmful to humans and aquatic species. Lastly, it does not require intensive labor and energy; thus, considered economical.

In October 2021, a pilot *Microbial Bioremediation* project was implemented in Estero de Paco to treat its heavily polluted waters reflecting alarming levels of Fecal Coliform count at 7.6 Million Most Probable Number (MPN)/100mL, Biochemical Oxygen Demand (BOD) level reaching 81.00 mg/L, Phosphate

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concentration at 2.03 mg/L, and level of Ammonia at 4.81 mg/L, all exceeding their respective Class C guidelines.

Estero de Paco is one of the critical Pasig River tributaries in Metro Manila known for its odorous waters and poor quality due to informal settler families (ISFs), indiscriminate dumping of solid wastes, and untreated wastewater discharges. During the implementation of the pilot Microbial Bioremediation Project in the area, the presence of floating solid wastes and rampant wastewater discharge from ISFs persisted. Nonetheless, immediate improvement in terms of water odor was observed. Further, a downward trend of Fecal Coliform count and consistent passing levels of Total Suspended Solids and Nitrate were significantly noted.

To continuously treat and intensify the rehabilitation efforts in Estero de Paco, high concentration levels and a consistent application frequency of bioremediation solution is aimed to be performed for a more efficient and sustainable ambient water treatment measure.

With that, the project intends to further improve the water quality of Estero de Paco, hereinafter referred to as the project area, specifically in terms of reduction of Biochemical Oxygen Demand (BOD), Dissolved Oxygen (DO), Fecal coliform, Nitrates, Phosphates, Total Suspended Solids, and Ammonia; as well as further reduce the foul odor emitted from the waterway using Microbial Bioremediation technology.

II. Approved Budget for the Contract (ABC)

The total ABC for the project is **EIGHT HUNDRED NINETY THOUSAND PESOS ONLY (Php 890,000.00)** inclusive of all applicable government taxes and service charges.

III. Scope of Work

The winning bidder or supplier shall supply, prepare, deliver, and apply the bioremediation solution at the identified application sites of the project area as well as submit two (2) technical reports, as defined herein, which shall include, but not limited to the following:

- A. Supply, which entails the provision of the desired bioremediation solution sets as indicated in Section IV, B. Technical Requirements;
- B. Prepare the desired set/s of bioremediation solutions ready for application based on the Application Timeline, which includes the disposition of all necessary and relevant equipment, manpower, and other resources necessary in the preparation and dilution of the bioremediation solution;

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(page 4 of 13)****3) Water Quality**

Based on the average endline laboratory results from the C.Y. 2021 sampling proper, five (5) out of seven (7) monitored water quality parameters failed the Class C guidelines stipulated in the DENR Administrative Order (DAO) 2016-08 as shown in the table below:

Table 1. Endline Water Quality Data of Estero de Paco

Parameters	DAO No. 2016-08 Class C Guideline	Endline Water Quality Laboratory Results	Remarks
Fecal Coliform (FC)	200 MPN/100 mL	7,475,000.00 MPN/100 mL	FAILED
Biochemical Oxygen Demand (BOD)	7 mg/L	75.75 mg/L	FAILED
Dissolved Oxygen (DO)	5 mg/L (min.)	0.30 mg/L	FAILED
Total Suspended Solids (TSS)	80 mg/L	37.75 mg/L	PASSED
Nitrate	7 mg/L	0.10 mg/L	PASSED
Phosphate	0.5 mg/L	2.71 mg/L	FAILED
Ammonia	0.05 mg/L	18.95 mg/L	FAILED

Data gathered during the pilot implementation in Estero de Paco shows that Fecal coliform resulted to a high percentage reduction at 42.28% indicating a promising improvement in terms of the efficacy of Bioremediation Solution in degrading unwanted microbes on polluted waters. Further, although Nitrates and TSS have increased over time, their concentration is still considered safe. BOD, Phosphate, and Ammonia, on the other hand, also reflected high concentration levels from the obtained data which may indicate continuous pollution loading through dumping of solid wastes and persistent liquid waste discharges in the area. Shown in the table below is the trend of improvement in Estero de Paco in relation to the target reduction during the pilot implementation of the project.

Table 2. Improvement Trend in relation to the Target Reduction of Estero de Paco

Parameters	Target % Reduction (Phase 1)	Actual % Reduction	Remarks
Fecal Coliform (FC)	15%	-42.28%	• Downward trend yet failing the DAO 2016-08 guideline
Biochemical Oxygen Demand (BOD)	10%	-29.21%	• Downward trend passing the target reduction yet failed to meet the DAO 2016-08 guideline
Total Suspended	15%	+1.34%	• Upward trend yet passing the



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Solids (TSS)			DAO 2016-08 guideline
Nitrate	10%	-7.47%	• Downward trend yet failing to meet the target reduction
Phosphate	5%	+29.58%	• Upward trend failing the DAO 2016-08 guideline
Ammonia	7%	-9.76%	• Downward trend passing the target reduction yet failed to meet the DAO 2016-08 guideline

Note: Green means Favorable, Red means Unfavorable

4) Application Site

An ocular inspection was conducted on January 19, 2022 in Estero de Paco to re-survey the area, to identify application points in the project site, the following criteria were followed:

1. One (1) station in the upstream portion, one (1) in midstream, and another one (1) at the downstream portion of the waterway for the bioremediation solution to be well dispersed along the waterway;
2. Access to the waterway;
3. Parking requirement for the delivery truck;
4. Vehicle traffic volume; and
5. Minimal presence of solid waste and informal settler families (ISFs).

In this regard, four (4) application points namely Quirino Avenue (upstream), Pedro Gil (mid-upstream), Apacible (midstream), and UN Avenue (downstream) were chosen as illustrated in Figure 2.



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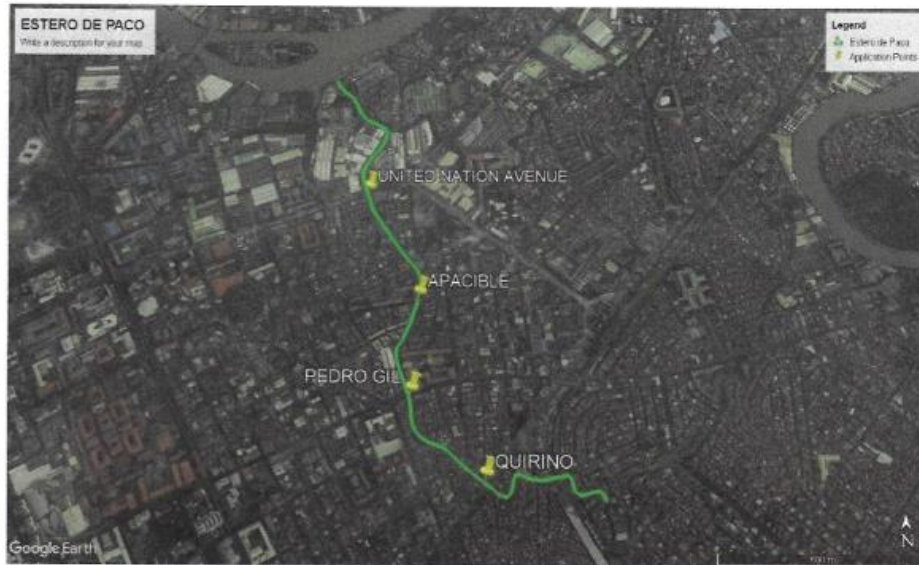


Figure 2. Identified Application Points in Estero de Paco

B. Technical Requirements

1. The technical requirements and evaluation parameters are as follows:

Parameters	Evaluation of Parameter
1. Composition of Solution	<ul style="list-style-type: none"> Contains trillions of beneficial microorganisms specifically: Lactobacillus sp., Bacillus sp., Azospirillum sp., Saccharomyces sp., Bacterial count, Yeast count, etc. Contains at least concentrated enzymes
2. Preparation of One (1) Solution Set	<ul style="list-style-type: none"> One (1) set of Bioremediation Solution shall contain at least 2 kilograms of Bioremediation Solution powder which will be diluted to approximately 40 liters of unchlorinated water
3. Preparation of Solution to be Applied per day	<ul style="list-style-type: none"> The desired number of sets per day will be combined and further diluted to make a bioremediation solution (i.e. On Day 1 of Week 1, at least 7 sets of bioremediation solution will be applied in different application points)

C. Application Timeline

The desired numbers of Bioremediation Solution sets to be applied were calculated based on the volume and flow rate of water as well as its water quality. Based on the approximate volume of 40,000 cubic meters and



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average flow rate of 0.04 m/s of Estero de Paco, the desired number of sets to be applied per day is as follows:

MONTH 1

56 SETS	MON	TUE	WED	THU	FRI	Number of Sets of Bio-Solution per week
Number of Sets of Bio-Solution per day		7 sets				7 sets
		7 sets				7 sets
		7 sets				7 sets
		7 sets				7 sets

MONTH 2

	MON	TUE	WED	THU	FRI	Number of Sets of Bio-Solution per week
Number of Sets of Bio-Solution per day		7 sets				7 sets
		7 sets				7 sets
		7 sets				7 sets
		7 sets				7 sets

The desired number of sets per day will be combined and further diluted to make at least 40 liters of bioremediation solution which will be applied in different application points of Estero de Paco.

D. Testing

To assess the effectiveness of the bioremediation solution in treating Estero de Paco, reduction of the following water quality parameters shall be monitored:

1. Fecal Coliform (FC)
2. Biochemical Oxygen Demand (BOD)
3. Total Suspended Solids (TSS)
4. Nitrate
5. Phosphate
6. Ammonia

The above-mentioned parameters were based on the previously monitored parameters from the 2021 implemented pilot project

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Further, the table below shows the target percentage reduction for each water quality parameter:

Parameters	Target % Reduction
Fecal Coliform (FC)	25%
Biochemical Oxygen Demand (BOD)	15%
Total Suspended Solids (TSS)	15%
Nitrate	10%
Phosphate	5%
Ammonia	7%

The target percentage reduction was based on the results of the pilot application of bioremediation solution in Estero de Paco last CY 2021.

Water sampling before the first application of bioremediation solution in Estero de Paco shall be conducted to serve as a reference point in calculating the percentage reduction per parameter. Meanwhile, the identified application points presented in Figure 2 shall also serve as the water quality monitoring stations. This is to determine the extent of the applied bioremediation solution as well as to identify other external factors that affect the area. Presented in Figure 3 is the water quality monitoring stations in Estero de Paco.

To add, a series of water samplings shall be conducted weekly specifically before the first day of application per week to measure the effectiveness of the product in treating Estero de Paco. Moreover, another water sampling shall also be performed one (1) week and one (1) month after the last day of application for further monitoring and evaluation of the project.

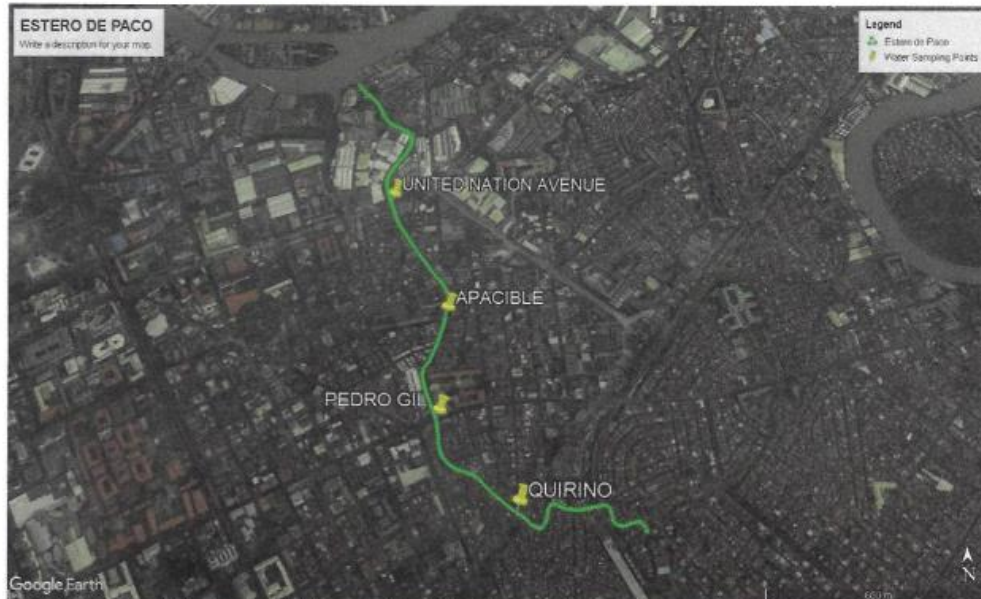
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Figure 3. Water Quality Monitoring Stations in Estero de Paco

E. Technical Report

For more efficient and sustainable project implementation, an Initial Report shall be provided by the Supplier with the following proposed chapters:

1. Background
2. Product Description and Mechanism
3. Target percentage Reduction
4. Methodology
 - a. Application Dosage (i.e. calculation of the required volume of solution)
 - b. Application Timeline
 - c. Sampling Frequency
5. Conclusion and Recommendation
 - a. Comparative Analysis from the Phase 1 of the project

This shall serve as an operational guideline if the project will be replicated in other priority tributaries.

Meanwhile, a final report containing an Assessment and/or Evaluation capturing the Pre-Application, Application, and Post-Application Phase, Interpretation of Results, and Technical Recommendations for the improvement of the project shall also be submitted by the Supplier. This report, on the other hand, shall serve as a counter-part of the study conducted by DENR-PRCMO.

**PLEASE USE THIS BID FORM. DO NOT RETYPE OR ALTER****Section VI-B
(Page 10 of 13)****F. Completion Period**

Delivery and application of the first (1st) batch of the bioremediation solution set shall be within fifteen (15) calendar days from receipt of Notice to Proceed (NTP). The delivery and application of the remaining seven (7) batches of solution sets must be completed within two (2) months from the delivery and application of the first (1st) batch of the solution set. Consequently, application timeline indicated in Section IV-C of the Project Requirements must be strictly followed.

V. Other Requirements

1. The Supplier shall submit a document stating that the product complies with the required technical specifications.
2. The product should have been tested and proven effective in treating wastewater. Results of analysis from DENR-Accredited Laboratory of past completed projects or product testing (i.e. before and after treatment/application of bioremediation solution) shall be presented.
3. The Supplier shall submit a certification stating that the product is environmentally safe (Material/Product Safety Data Sheet).
4. To ensure that the processes and procedures of the supplier has the quality, efficiency, consistency and safety with regards to the standards set forth by the International Organization for Standardization (ISO). The supplier shall submit the following ISO Certifications:
 - a. ISO 9001:2015 (Quality Management System)
 - b. ISO 14001:2015 (Environmental Management System)
5. The Supplier shall comply with the delivery schedule specified in the application timeline. Moreover, upon the receipt of NTP by the Supplier, the End User will send a formal letter indicating the dates of application of the project.
6. The Supplier may opt to lease a warehouse or stockroom where the bioremediation solution set will be prepared, OR the supplier may transport the prepared solution directly from their manufacturing plant to the identified application points in Estero de Paco. Further, the product must be examined by the DENR Inspection Committee and the PRCMO representatives before application. Figure 2 is the map of the application points for reference.
7. Delivery fee and other applicable fees (i.e. energy cost for equipment) shall be included in the unit cost of the product.
8. For the assessment of the product efficiency and technical report requirements, joint-sampling between DENR-PRCMO and the Supplier shall be done to ensure the integrity of samples of both parties. The Supplier shall shoulder the expenses incurred for the laboratory analysis of their collected

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samples. Further, laboratory analysis of collected water samples shall be conducted on a Department of Environment and Natural Resources (DENR) recognized and accredited laboratory. In this regard, the Supplier shall also submit a copy of the certificate of the laboratory as a DENR-recognized laboratory as an attachment to the Final Report.

VI. Duties and Responsibilities of DENR-PRCMO

1. Duly assigned PRCMO-WQWMD personnel shall coordinate with barangays along Estero de Paco before the application of the bioremediation solution.
2. Duly assigned PRCMO-WQWMD personnel shall monitor and assist the Supplier in the application of the bioremediation solution in Estero de Paco.
3. Duly assigned PRCMO-WQWMD personnel shall conduct water quality monitoring activities to assess the effectiveness of the product in treating Estero de Paco.

VII. Terms of Payment

Payment shall be made based on the following:

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 - A. Background;
 - B. Product Description and Mechanism;
 - C. Target percentage reduction; and
 - D. Methodology indicating the application scheme specifically,
 - a. Water Quality Monitoring Stations and Application Points
 - b. Application Timeline and Dosage
 - c. Sampling Frequency
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 - B. Manual or procedural guidelines;
 - C. Technical analysis on Data and Results garnered in the Pre-Application Phase, Application Phase, and Post-Application Phase of the project and technical discussion of the Conclusion;
 - D. Results of Analysis (from DENR-recognized laboratory) including Certification of Laboratory Recognition for Water Analysis from DENR – EMB; and



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**Section VI-B
(Page 12 of 13)**

- E. Recommendations on issues encountered during implementation of the project and other areas for improvement.
3. The remaining 15% of the total project cost shall only be paid once the 25% fecal coliform reduction target is met. In case, additional application of bioremediation solution is needed in order to meet the 25% average reduction in fecal coliform, this shall be at no additional cost to the proponent.

Prepared by:


MA. RAISAH AVERIEL P. BALMES
Engineer IV

Reviewed by:


ANNE MARIE P. NILLES, EnP, MAURP
Chief Environmental Management Specialist

Approved by:


DR. JOAN A. LAGUNDA, MNSA
Assistant Secretary for Administration and Legislative Affairs; and
Concurrent OIC Executive Director of Pasig River Coordinating and Management Office



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B. Other Requirements

- 3. Bidder has no overdue deliveries or unperformed services intended for DENR.
- 4. Bidder did not participate as a consultant in the preparation of the design or technical specification of the GOODS/SERVICES subject of the bid.

BIDDER’S UNDERTAKING

I/We, the undersigned bidder, having examined the Bidding Documents including Bid Bulletins, as applicable, hereby BID to (supply/deliver/perform/comply) the above Terms of Reference

I/We undertake, if our bid is accepted, to deliver the goods/services in accordance with the terms and conditions contained in the bid documents, including the posting of the required performance security within ten (10) calendar days from receipt of the Notice of Award.

Until a formal contract/order confirmation is prepared and signed, this Bid is binding on us.

Name of Company (in print)

Signature of Company Authorized Representative

Name & Designation (in print)

Date

**PLEASE USE THIS BID FORM. DO NOT RETYPE OR ALTER****Section VI-C
(Page 1 of 12)****Schedule of Requirements****Supply, Delivery and Application of Bioremediation Solution for the Water Quality Improvement
Lot No. 3: Estero de Pandacan**

Instruction to Bidders: **Please fill up the form accordingly and sign the Bidder's Undertaking. Failure to conform will result in a rating of "FAILED".**

C. TERMS OF REFERENCE as of 02 September 2022

Republic of the Philippines
Department of Environment and Natural Resources
Visayas Avenue, Diliman, Quezon City, 1100
Trunkline (632) 929-66-26 • 929-6628 • 929-6635 • 929-4028
Voice-Over-Internet-Protocol (VOIP) Trunkline (632) 755-3330

**TERMS OF REFERENCE
as of 02 September 2022****Procurement and Application of Bioremediation Solution for the Water
Quality Improvement of Estero de Pandacan****I. Rationale**

The Pasig River Coordinating and Management Office (PRCMO) was created under the Department of Environment and Natural Resources Central Office (DENR-CO) through Department Administrative Order No. 2020-02 whose main objective is to ensure continuity of the plans and programs of the rehabilitation and development of Pasig River in line with the Manila Bay Rehabilitation Program.

As part of the main functions of PRCMO which is to adopt water quality improvement strategies, interventions, and technologies that aim to improve the Pasig River System and its environs, conventionally used technologies such as Bioremediation are continuously explored.

Bioremediation is an emerging technology in river pollution control that facilitates the removal or neutralization of pollutants from a contaminated site. This intervention has different types such as *Microbial Bioremediation* which involves microorganisms to degrade pollutants and use them as food source, *Phytoremediation* which utilizes plants to absorb contaminants, and *Mycoremediation* which uses fungi's digestive enzymes to break down impurities. For this project, *Microbial Bioremediation* was chosen through an in-situ application of a bioremediation solution.

Microbial Bioremediation stimulates the growth of certain beneficial microbes thru microbial metabolism. This process converts contaminants into food and energy. Further, this technology can be directly and easily applied to polluted sites; hence, no circumstances could lead to secondary pollution or pollutant movement. Also, it does not pose any threat to the surrounding communities given that the applied microbes are organic and not harmful to humans and aquatic species. Lastly, it does not require intensive labor and energy; thus, considered economical.

In the 2021 Annual Water Quality Report of PRCMO, Estero de Pandacan was considered as a priority estero due to the fact that it recorded 6.72 Million Most Probable Number (MPN)/100mL of Fecal Coliform and Biochemical Oxygen Demand (BOD) concentration at 80.20 mg/L. Also, the 2021 monitoring

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results showed that Estero de Pandacan failed in seven (7) out of 20 parameters. Most of the failed parameters are primary parameters such as BOD, Dissolved Oxygen (DO), Fecal Coliform, and nutrients.

With that, the project intends to improve the water quality of Estero de Pandacan, hereinafter referred to as the project area, specifically in terms of reduction of Biochemical Oxygen Demand (BOD), Dissolved Oxygen (DO), Fecal coliform, Nitrates, Phosphates, Total Suspended Solids, and Ammonia; as well as further reduce the foul odor emitted from the waterway using Microbial Bioremediation technology.

II. Approved Budget for the Contract (ABC)

The total ABC for the project is **ONE MILLION PESOS ONLY (PHP 1,000,000.00)** inclusive of all applicable government taxes and service charges.

III. Scope of Works

The winning bidder or supplier shall supply, prepare, deliver, and apply the bioremediation solution at the identified application sites of the project area as well as submit two (2) technical reports, as defined herein, which shall include, but not limited to the following:

- A. Supply, which entails the provision of the desired bioremediation solution sets as indicated in Section IV, B. Technical Requirements;
- B. Prepare the desired set/s of bioremediation solutions ready for application based on the Application Timeline, which includes the disposition of all necessary and relevant equipment, manpower, and other resources necessary in the preparation and dilution of the bioremediation solution;
- C. Deliver and apply the prepared bioremediation solution, which includes the disposition of all necessary and relevant equipment, manpower, and other resources;
- D. Prepare and submit two (2) technical reports (i.e. initial and final), which contains the minimum information stated in Section IV, E. Technical Report;
- E. The winning Supplier shall be responsible for the acquisition permits and other documents on the transport of the bioremediation solution, if necessary.

**PLEASE USE THIS BID FORM. DO NOT RETYPE OR ALTER****Section VI-C
(Page 3 of 12)****IV. Project Requirements****A. Project Area (Overview of Estero de Pandacan)****1) Characteristics**

Estero de Pandacan is one of the 47 tributaries of Pasig River in Manila that directly outflows to Pasig River. It has a length of 4,183 meters waterway, average width of 6 meters, average depth of 0.90 meters and an average flow rate of 0.645 m/s. Along the vicinity of Estero de Pandacan are storage facilities, factories, oil depots, and residential areas. Solid and liquid wastes generated by these establishments are directly dumped and discharged into the river without any treatment. Figure 1 shows the location map of Estero de Pandacan.

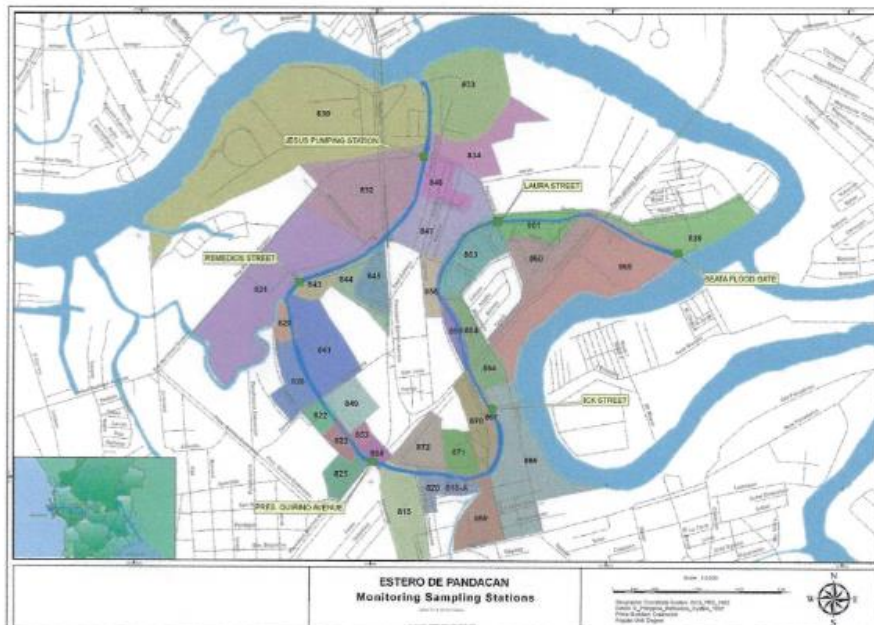
2) Location map

Figure 1. Location Map of Estero de Pandacan

3) Water Quality

Based on the CY 2021 water quality monitoring of the 47 identified tributaries of the Pasig River System, Estero de Pandacan has failed the Class C guidelines stipulated in the DENR Administrative Order (DAO) 2016-08, in seven (7) out of 20 parameters as shown in the table below:

**PLEASE USE THIS BID FORM. DO NOT RETYPE OR ALTER****Section VI-C
(Page 4 of 12)***Table 1. 2021 Annual Water Quality Data of Estero de Pandacan*

Parameters	DAO No. 2016-08 Class C Guideline	2021 Annual WQM Data	Remarks
pH	6.5 - 9.0	7.30	PASSED
Temperature	25-31 °C	27.93	PASSED
Fecal coliform	200MPN/100mL	6,720,000.00	FAILED
BOD	7 mg/L	80.20	FAILED
Chloride	350 mg/L	36.64	PASSED
DO	5 mg/L (min.)	1.10	FAILED
Nitrate	7 mg/L	0.031	PASSED
Phosphate	0.5 mg/L	1.57	FAILED
TSS	80 mg/L	24.40	PASSED
Color	75 TCU	24.00	PASSED
Ammonia	0.05 mg/L	14.47	FAILED
Arsenic	0.02 mg/L	<0.0100	PASSED
Cadmium	0.005 mg/L	<0.0030	PASSED
Chromium	0.01 mg/L	<0.0170	INDETERMINATE
Copper	0.02 mg/L	<0.0030	PASSED
Lead	0.05 mg/L	0.0316	PASSED
Mercury	0.002 mg/L	<0.0005	PASSED
Cyanide	0.1 mg/L	0.99	FAILED
Oil and Grease	2 mg/L	4.80	FAILED
Phenolic substances	0.05 mg/L	ND	ND

4) Application Site

An ocular inspection was conducted on May 26, 2022 in Estero de Pandacan to inspect for possible application points and monitoring stations for the pilot implementation. To identify the desired locations in the project site, the following criteria were followed:

1. One (1) station in the upstream portion, and another one (1) at the downstream portion of the waterway for the bioremediation solution to be well dispersed along the waterway;
2. Access to the waterway;
3. Parking requirement for the delivery truck;
4. Vehicle traffic volume; and
5. Minimal presence of solid waste and informal settler families (ISFs).

In this regard, two (2) application points namely Remedios station, (upstream), and Jesus Pumping station (downstream) were chosen as illustrated in Figure 2.



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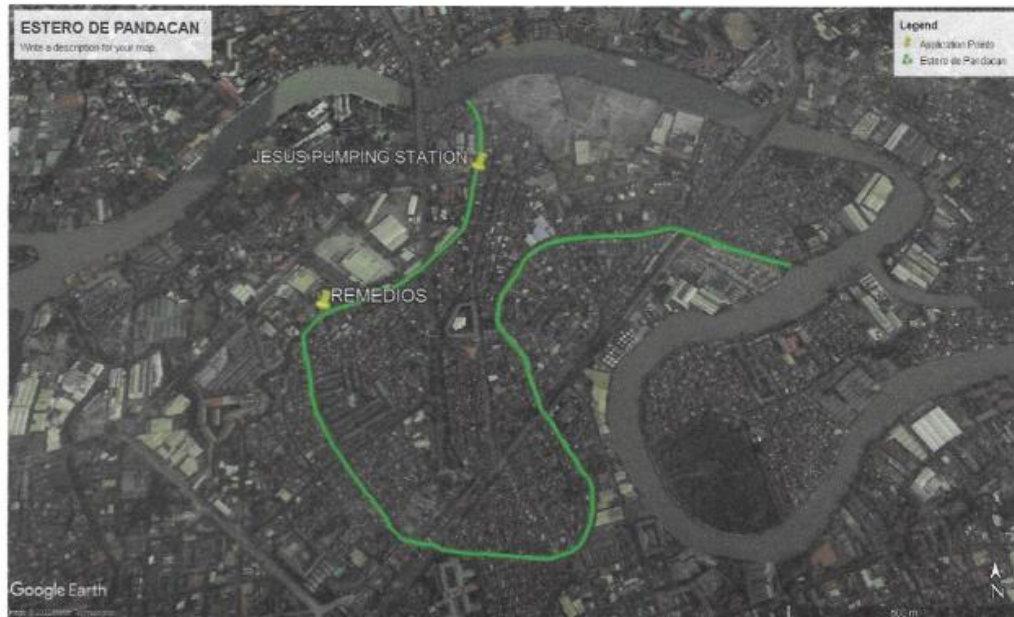


Figure 2. Identified Application Points in Estero de Pandacan

B. Technical Requirements

1. The technical requirements and evaluation parameters are as follows:

Parameters	Evaluation of Parameter
1. Composition of Solution	<ul style="list-style-type: none"> Contains trillions of beneficial microorganisms specifically: Lactobacillus sp., Bacillus sp., Azospirillum sp., Saccharomyces sp., Bacterial count, Yeast count, etc. Contains at least concentrated enzymes
2. Preparation of One (1) Solution Set	<ul style="list-style-type: none"> One (1) set of Bioremediation Solution shall contain at least 2 kilograms of Bioremediation Solution powder which will be diluted to approximately 40 liters of unchlorinated water
3. Preparation of Solution to be Applied per day	<ul style="list-style-type: none"> The desired number of sets per day will be combined and further diluted to make a bioremediation solution (i.e. On Day 1 of Week 1, at least 8 sets of bioremediation solution will be applied in different application points)

C. Application Timeline

The desired number of Bioremediation Solution sets to be applied was calculated based on the volume and flow rate of water as well as its

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water quality. Based on the approximate volume of 23,000 cubic meters and average flow rate of 0.645 m/s of Estero de Pandacan, the desired numbers of sets to be applied per day are as follows:

MONTH 1

60 SETS	MON	TUE	WED	THU	FRI	Number of Sets of Bio-Solution per week
Number of Sets of Bio-Solution per day				8 sets		8 sets
				8 sets		8 sets
				8 sets		8 sets
				8 sets		8 sets

MONTH 2

	MON	TUE	WED	THU	FRI	Number of Sets of Bio-Solution per week
Number of Sets of Bio-Solution per day				7 sets		7 sets
				7 sets		7 sets
				7 sets		7 sets
				7 sets		7 sets

The desired number of sets per day will be combined and further diluted to make at least 40 liters of bioremediation solution which will be applied in different application points of Estero de Pandacan.

D. Testing

To assess the effectiveness of the bioremediation solution in treating Estero de Pandacan, reduction of the following water quality parameters shall be monitored:

1. Fecal Coliform (FC)
2. Biochemical Oxygen Demand (BOD)
3. Total Suspended Solids (TSS)
4. Nitrate
5. Phosphate
6. Ammonia

The above-mentioned parameters were selected since based on the results of the CY 2021 water quality monitoring in Estero de Pandacan conducted by the DENR-PRCMO, majority of these parameters have failed

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the Class C guideline stated in the DENR Administrative Order (DAO) 2016-08.

Further, the table below shows the target percentage reduction for each water quality parameter:

Parameters	Target % Reduction
Fecal Coliform (FC)	20%
Biochemical Oxygen Demand (BOD)	15%
Total Suspended Solids (TSS)	15%
Nitrate	10%
Phosphate	7%
Ammonia	10%

The target percentage reduction was based on the results of the pilot application of bioremediation solution in different esteros in Manila last CY 2021 specifically in Estero de Binondo, Estero dela Reina and Estero de Paco. This is a valid basis for the target percentage reduction in Estero de Pandacan since these waterways are similar especially with respect to their characteristics and geographical location.

Water sampling before the first application of bioremediation solution in Estero de Pandacan shall be conducted to serve as a reference point in calculating the percentage reduction per parameter. Meanwhile, the identified application points presented in Figure 2 shall also serve as the water quality monitoring stations. This is to determine the extent of the applied bioremediation solution as well as to identify other external factors that affect the area. Presented in Figure 3 is the water quality monitoring stations in Estero de Pandacan.

To add, a series of water samplings shall be conducted weekly specifically before the application of bioremediation solution to measure the effectiveness of the product in treating Estero de Pandacan. Moreover, another water sampling shall also be performed one (1) week and one (1) month after the last day of application for further monitoring and evaluation of the project.



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Figure 3. Water Quality Monitoring Stations in Estero de Pandacan

E. Technical Report

For more efficient and sustainable project implementation, an Initial Report shall be provided by the Supplier with the following proposed chapters:

1. Background
2. Product Description and Mechanism
3. Target percentage Reduction
4. Methodology
 - a. Application Dosage (i.e. calculation of the required volume of solution)
 - b. Application Timeline
 - c. Sampling Frequency
5. Conclusion and Recommendation

This shall serve as an operational guideline if the project will be replicated in other priority tributaries.

Meanwhile, a Final Report containing an Assessment and/or Evaluation capturing the Pre-Application, Application, and Post-Application Phase, Interpretation of Results, and Technical Recommendations for the improvement of the project shall also be submitted by the Supplier. This report, on the other hand, shall serve as a counter-part of the study conducted by DENR-PRCMO.

**PLEASE USE THIS BID FORM. DO NOT RETYPE OR ALTER****Section VI-C
(Page 9 of 12)****F. Completion Period**

Delivery and application of the first (1st) batch of the solution set shall be within **twenty (20) calendar days** from receipt of Notice to Proceed (NTP). The delivery and application of the remaining seven (7) batches of solution sets must be completed within two (2) months from the delivery and application of the first (1st) batch of the solution set. Consequently, application timeline indicated in Section IV-C of the Project Requirements must be strictly followed.

V. Other Requirements

1. The Supplier shall submit a document stating that the product complies with the required technical specifications.
2. The product should have been tested and proven effective in treating wastewater. Results of analysis from DENR-Accredited Laboratory of past completed projects or product testing (i.e. before and after treatment/application of bioremediation solution) shall be presented.
3. The Supplier shall submit a certification stating that the product is environmentally safe (Material/Product Safety Data Sheet).
4. **To ensure that the processes and procedures of the supplier has the quality, efficiency, consistency and safety with regards to the standards set forth by the International Organization for Standardization (ISO). The supplier shall submit the following ISO Certifications:**
 - a. **ISO 9001:2015 (Quality Management System)**
 - b. **ISO 14001:2015 (Environmental Management System)**
5. The Supplier shall comply with the delivery schedule specified in the application timeline. **Moreover, upon the receipt of NTP by the Supplier, the End User will send a formal letter indicating the dates of application of the project.**
6. The Supplier may opt to lease a warehouse or stockroom where the bioremediation solution set will be prepared, OR the supplier may transport the prepared solution directly from their manufacturing plant to the identified application points in Estero de Pandacan. Further, the product must be examined by the DENR Inspection Committee and the PRCMO representatives before application. Figure 2 is the map of the application points for reference.
7. Delivery fee and other applicable fees (i.e. energy cost for equipment) shall be included in the unit cost of the product.
8. For the assessment of the product efficiency and technical report requirements, joint-sampling between DENR-PRCMO and the Supplier shall be done to ensure the integrity of samples of both parties. The Supplier shall

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shoulder the expenses incurred for the laboratory analysis of their collected samples. Further, laboratory analysis of collected water samples shall be done by a Department of Environment and Natural Resources (DENR) recognized and accredited laboratory. In this regard, the Supplier shall also submit a photocopy of the certificate of the laboratory as a DENR-recognized laboratory as an attachment to the Final Report.

VI. Duties and Responsibilities of DENR-PRCMO

1. Duly assigned PRCMO-WQWMD personnel shall coordinate with barangays along Estero de Pandacan before the application of the bioremediation solution.
2. Duly assigned PRCMO-WQWMD personnel shall monitor and assist the Supplier in the application of the bioremediation solution in Estero de Pandacan.
3. Duly assigned PRCMO-WQWMD personnel shall conduct water quality monitoring activities to assess the effectiveness of the product in treating Estero de Pandacan.

VII. Terms of Payment

Payment shall be made based on the following:

1. Payment of 35% of total project cost shall be made after 50% delivery and application of desired number of bioremediation solution set, the issuance of the Certificate of Inspection and Acceptance by the DENR and the submission of Inspection Report by the supplier which shall include the following:
 - A. Background;
 - B. Product Description and Mechanism;
 - C. Target percentage reduction; and
 - D. Methodology indicating the application scheme specifically,
 - a. Water Quality Monitoring Stations and Application Points
 - b. Application Timeline and Dosage
 - c. Sampling Frequency
2. Payment of 50% of total project cost shall be made after 100% completion of delivery and application of desired number of bioremediation solution set, the issuance of the Certificate of Inspection and Acceptance by the DENR, and the submission of Final Report by the supplier which contains the following:
 - A. Summary of activities conducted in the implementation of the project;
 - B. Manual or procedural guidelines;
 - C. Technical analysis on Data and Results garnered in the Pre-Application Phase, Application Phase, and Post-Application Phase of the project and technical discussion of the Conclusion;



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- D. Results of Analysis (from DENR-recognized laboratory) including Certification of Laboratory Recognition for Water Analysis from DENR – EMB; and
 - E. Recommendations on issues encountered during implementation of the project and other areas for improvement.
3. The remaining 15% of the total project cost shall only be paid once the 20% fecal coliform reduction target is met. In case, additional application of bioremediation solution is needed in order to meet the 20% average reduction in fecal coliform, this shall be at no additional cost to the proponent.

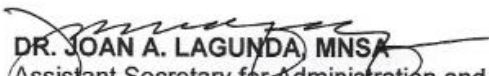
Prepared by:


MA. RAISAH AVERIEL P. BALMES
Engineer IV

Reviewed by:


ANNE MARIE P. NILLES, EnP, MAURP
Chief Environmental Management Specialist

Approved by:


DR. JOAN A. LAGUNDA, MNSA
Assistant Secretary for Administration and Legislative Affairs; and
Concurrent OIC Executive Director of Pasig River Coordinating and Management Office



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B. Other Requirements

1. Bidder has no overdue deliveries or unperformed services intended for DENR.
2. Bidder did not participate as a consultant in the preparation of the design or technical specification of the GOODS/SERVICES subject of the bid.

BIDDER’S UNDERTAKING

I/We, the undersigned bidder, having examined the Bidding Documents including Bid Bulletins, as applicable, hereby BID to (supply/deliver/perform/comply) the above Terms of Reference

I/We undertake, if our bid is accepted, to deliver the goods/services in accordance with the terms and conditions contained in the bid documents, including the posting of the required performance security within ten (10) calendar days from receipt of the Notice of Award.

Until a formal contract/order confirmation is prepared and signed, this Bid is binding on us.

Name of Company (in print)

Signature of Company Authorized Representative

Name & Designation (in print)

Date

**PLEASE USE THIS BID FORM. DO NOT RETYPE OR ALTER****Section VI-D
(Page 1 of 12)****Schedule of Requirements****Supply, Delivery and Application Bioremediation Solution for the Water Quality Improvement
Lot No. 4: Estero de Kabulusan**

Instruction to Bidders: **Please fill up the form accordingly and sign the Bidder's Undertaking. Failure to conform will result in a rating of "FAILED".**

C. TERMS OF REFERENCE as of 02 September 2022

Republic of the Philippines
Department of Environment and Natural Resources
Visayas Avenue, Diliman, Quezon City, 1100
Trunkline (632) 929-66-26 • 929-6628 • 929-6635 • 929-4028
Voice-Over-Internet-Protocol (VOIP) Trunkline (632) 755-3330

**TERMS OF REFERENCE
as of 02 September 2022****Procurement and Application of Bioremediation Solution for the Water
Quality Improvement of Estero de Kabulusan****I. Rationale**

The Pasig River Coordinating and Management Office (PRCMO) was created under the Department of Environment and Natural Resources Central Office (DENR-CO) through Department Administrative Order No. 2020-02 whose main objective is to ensure continuity of the plans and programs of the rehabilitation and development of Pasig River in line with the Manila Bay Rehabilitation Program.

As part of the main functions of PRCMO which is to adopt water quality improvement strategies, interventions, and technologies that aim to improve the Pasig River System and its environs, conventionally used technologies such as Bioremediation are continuously explored.

Bioremediation is an emerging technology in river pollution control that facilitates the removal or neutralization of pollutants from a contaminated site. This intervention has different types such as *Microbial Bioremediation* which involves microorganisms to degrade pollutants and use them as food source, *Phytoremediation* which utilizes plants to absorb contaminants, and *Mycoremediation* which uses fungi's digestive enzymes to break down impurities. For this project, *Microbial Bioremediation* was chosen through an in-situ application of a bioremediation solution.

Microbial Bioremediation stimulates the growth of certain beneficial microbes thru microbial metabolism. This process converts contaminants into food and energy. Further, this technology can be directly and easily applied to polluted sites; hence, no circumstances could lead to secondary pollution or pollutant movement. Also, it does not pose any threat to the surrounding communities given that the applied microbes are organic and not harmful to humans and aquatic species. Lastly, it does not require intensive labor and energy; thus, considered economical.

In the 2021 Annual Water Quality Report of PRCMO, Estero de Kabulusan was considered a critical waterway with the highest contributor of pollutant in terms of Biochemical Oxygen Demand (BOD) concentration at 225.00 mg/L alongside with high levels of Fecal Coliform at 26 Million Most Probable Number (MPN)/100mL ranking 6 with the highest Fecal Coliform count among the 47 Pasig River Tributaries. Also, the 2021 monitoring results showed that Estero de

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Kabulusan failed in seven (7) out of 20 parameters. Most of the failed parameters are primary parameters such as BOD, Dissolved Oxygen (DO), Fecal Coliform, and nutrients.

With that, the project intends to improve the water quality of Estero de Kabulusan, hereinafter referred to as the project area, specifically in terms of reduction of Biochemical Oxygen Demand (BOD), Dissolved Oxygen (DO), Fecal coliform, Nitrates, Phosphates, Total Suspended Solids, and Ammonia; as well as further reduce the foul odor emitted from the waterway using Microbial Bioremediation technology.

II. Approved Budget for the Contract (ABC)

The total ABC for the project is **NINE HUNDRED EIGHTY THOUSAND PESOS ONLY (PHP 980,000.00)** inclusive of all applicable government taxes and service charges.

III. Scope of Works

The winning bidder or supplier shall supply, prepare, deliver, and apply the bioremediation solution at the identified application sites of the project area as well as submit two (2) technical reports, as defined herein, which shall include, but not limited to the following:

- A. Supply, which entails the provision of the desired bioremediation solution sets as indicated in Section IV, B. Technical Requirements;
- B. Prepare the desired set/s of bioremediation solutions ready for application based on the Application Timeline, which includes the disposition of all necessary and relevant equipment, manpower, and other resources necessary in the preparation and dilution of the bioremediation solution;
- C. Deliver and apply the prepared bioremediation solution, which includes the disposition of all necessary and relevant equipment, manpower, and other resources;
- D. Prepare and submit two (2) technical reports (i.e. initial and final), which contains the minimum information stated in Section IV, E. Technical Report;
- E. The winning Supplier shall be responsible for the acquisition permits and other documents on the transport of the bioremediation solution, if necessary.

**PLEASE USE THIS BID FORM. DO NOT RETYPE OR ALTER****Section VI-D
(Page 3 of 12)****IV. Project Requirements****A. Project Area (Overview of Estero de Kabulusan)****1) Characteristics**

Estero de Kabulusan is located at the North-West of Manila. It is situated within the Third Congressional District of Manila having a total number of 11 barangays with an estimate of 22,993 population as of 2020 census. It is the upstream portion of Estero de Binondo and has a 1,351 meters long waterway and an average width of 6 meters. It is also surrounded primarily with residential, commercial, and business establishments which greatly contributed to its poor water quality due to indiscriminate dumping of solid and liquid wastes. Figure 1 shows the location map of Estero de Kabulusan.

2) Location map

Figure 1. Location Map of Estero de Kabulusan

3) Water Quality

Based on the CY 2021 water quality monitoring of the 47 identified tributaries of the Pasig River System, Estero de Kabulusan has failed the Class C guidelines stipulated in the DENR Administrative Order (DAO) 2016-08, in seven (7) out of 20 parameters as shown in the table below:

**PLEASE USE THIS BID FORM. DO NOT RETYPE OR ALTER****Section VI-D
(Page 4 of 12)***Table 1. 2021 Annual Water Quality Data of Estero de Kabulusan*

Parameters	DAO No. 2016-08 Class C Guideline	2021 Annual WQM Data	Remarks
pH	6.5 - 9.0	7.29	PASSED
Temperature	25-31 °C	26.11	PASSED
Fecal coliform	200MPN/100mL	26,000,000.00	FAILED
BOD	7 mg/L	225.00	FAILED
Chloride	350 mg/L	313.00	PASSED
DO	5 mg/L (min.)	0.00	FAILED
Nitrate	7 mg/L	0.028	PASSED
Phosphate	0.5 mg/L	2.59	FAILED
TSS	80 mg/L	28.00	PASSED
Color	75 TCU	30.00	PASSED
Ammonia	0.05 mg/L	19.10	FAILED
Arsenic	0.02 mg/L	0.012	PASSED
Cadmium	0.005 mg/L	<0.003	PASSED
Chromium	0.01 mg/L	<0.017	INDETERMINATE
Copper	0.02 mg/L	<0.010	PASSED
Lead	0.05 mg/L	<0.010	PASSED
Mercury	0.002 mg/L	<0.0003	PASSED
Cyanide	0.1 mg/L	3.45	FAILED
Oil and Grease	2 mg/L	7.00	FAILED
Phenolic substances	0.05 mg/L	0.022	PASSED

4) Application Site

An ocular inspection was conducted on May 6, 2022 in Estero de Kabulusan to inspect for possible application points and monitoring stations for the pilot implementation. To identify the desired locations in the project site, the following criteria were followed:

1. One (1) station in the upstream portion, and another one (1) at the downstream portion of the waterway for the bioremediation solution to be well dispersed along the waterway;
2. Access to the waterway;
3. Parking requirement for the delivery truck;
4. Vehicle traffic volume; and
5. Minimal presence of solid waste and informal settler families (ISFs).

In this regard, two (2) application points namely Yuseco St., (upstream), and Old Torre (downstream) were chosen as illustrated in Figure 2.



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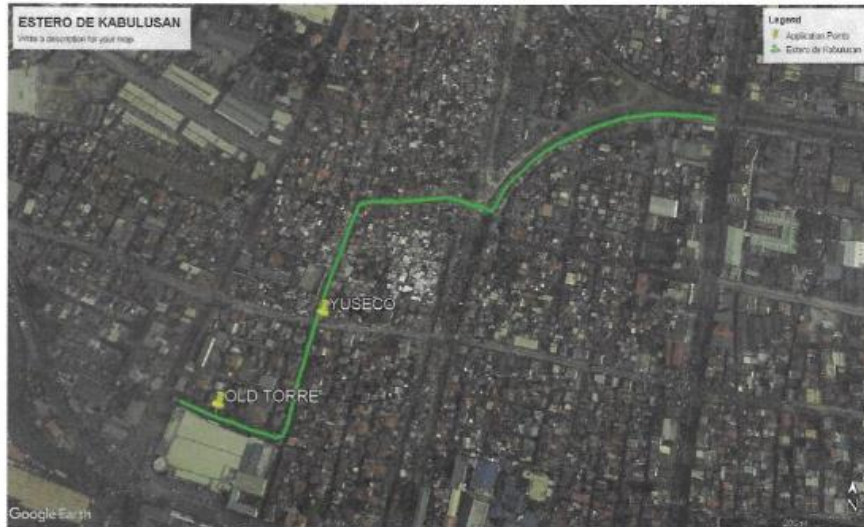


Figure 2. Identified Application Points in Estero de Kabulusan

B. Technical Requirements

1. The technical requirements and evaluation parameters are as follows:

Parameters	Evaluation of Parameter
1. Composition of Solution	<ul style="list-style-type: none"> Contains trillions of beneficial microorganisms specifically: Lactobacillus sp., Bacillus sp., Azospirillum sp., Saccharomyces sp., Bacterial count, Yeast count, etc. Contains at least concentrated enzymes
2. Preparation of One (1) Solution Set	<ul style="list-style-type: none"> One (1) set of Bioremediation Solution shall contain at least 2 kilograms of Bioremediation Solution powder which will be diluted to approximately 40 liters of unchlorinated water
3. Preparation of Solution to be Applied per day	<ul style="list-style-type: none"> The desired number of sets per day will be combined and further diluted to make a bioremediation solution (i.e. On Day 1 of Week 1, at least 8 sets of bioremediation solution will be applied in different application points)

C. Application Timeline

The desired number of Bioremediation Solution sets to be applied was calculated based on the volume and flow rate of water as well as its water quality. Based on the approximate volume of 8,000 cubic meters and average flow rate of 0.071 m/s of Estero de Kabulusan, the desired numbers of sets to be applied per day are as follows:



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MONTH 1

60 SETS	MON	TUE	WED	THU	FRI	Number of Sets of Bio-Solution per week
Number of Sets of Bio-Solution per day			8 sets			8 sets
			8 sets			8 sets
			8 sets			8 sets
			8 sets			8 sets

MONTH 2

	MON	TUE	WED	THU	FRI	Number of Sets of Bio-Solution per week
Number of Sets of Bio-Solution per day			7 sets			7 sets
			7 sets			7 sets
			7 sets			7 sets
			7 sets			7 sets

The desired number of sets per day will be combined and further diluted to make at least 40 liters of bioremediation solution which will be applied in different application points of Estero de Kabulusan.

D. Testing

To assess the effectiveness of the bioremediation solution in treating Estero de Kabulusan, reduction of the following water quality parameters shall be monitored:

1. Fecal Coliform (FC)
2. Biochemical Oxygen Demand (BOD)
3. Total Suspended Solids (TSS)
4. Nitrate
5. Phosphate
6. Ammonia

The above-mentioned parameters were selected since based on the results of the CY 2021 water quality monitoring in Estero de Kabulusan conducted by the DENR-PRCMO, majority of these parameters have failed the Class C guideline stated in the DENR Administrative Order (DAO) 2016-08.

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Further, the table below shows the target percentage reduction for each water quality parameter:

Parameters	Target % Reduction
Fecal Coliform (FC)	25%
Biochemical Oxygen Demand (BOD)	15%
Total Suspended Solids (TSS)	20%
Nitrate	15%
Phosphate	7%
Ammonia	15%

The target percentage reduction was based on the results of the pilot application of bioremediation solution in different esteros in Manila last CY 2021 specifically in Estero de Binondo, Estero dela Reina and Estero de Paco. This is a valid basis for the target percentage reduction in Estero de Kabulusan since these waterways are similar especially with respect to their characteristics and geographical location.

Water sampling before the first application of bioremediation solution in Estero de Kabulusan shall be conducted to serve as a reference point in calculating the percentage reduction per parameter. Meanwhile, the identified application points presented in Figure 2 shall also serve as the water quality monitoring stations. This is to determine the extent of the applied bioremediation solution as well as to identify other external factors that affect the area. Presented in Figure 3 is the water quality monitoring stations in Estero de Kabulusan.

To add, a series of water samplings shall be conducted weekly specifically before the first day of application per week to measure the effectiveness of the product in treating Estero de Kabulusan. Moreover, another water sampling shall also be performed one (1) week and one (1) month after the last day of application for further monitoring and evaluation of the project.



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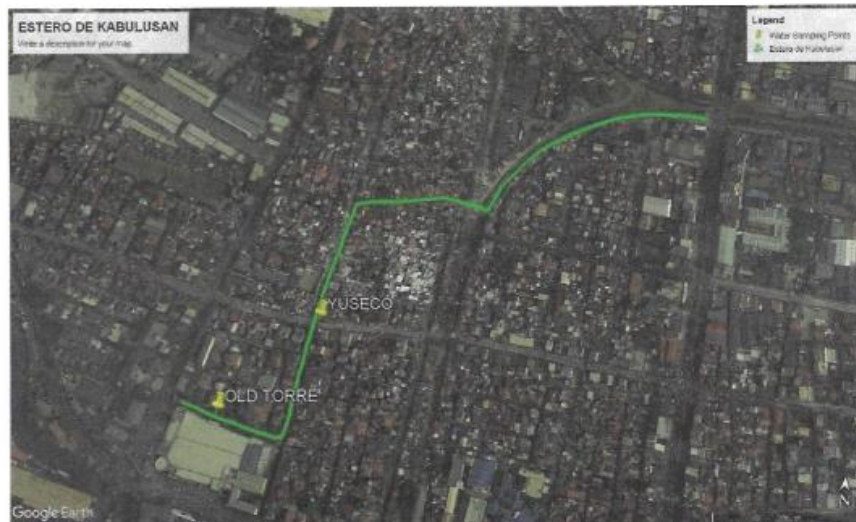


Figure 3. Water Quality Monitoring Stations in Estero de Kabulusan

E. Technical Report

For more efficient and sustainable project implementation, an Initial Report shall be provided by the Supplier with the following proposed chapters:

1. Background
2. Product Description and Mechanism
3. Target percentage Reduction
4. Methodology
 - a. Application Dosage (i.e. calculation of the required volume of solution)
 - b. Application Timeline
 - c. Sampling Frequency
5. Conclusion and Recommendation

This shall serve as an operational guideline if the project will be replicated in other priority tributaries.

Meanwhile, a Final Report containing an Assessment and/or Evaluation capturing the Pre-Application, Application, and Post-Application Phase, Interpretation of Results, and Technical Recommendations for the improvement of the project shall also be submitted by the Supplier. This report, on the other hand, shall serve as a counter-part of the study conducted by DENR-PRCMO.

F. Completion Period

Delivery and application of the first (1st) batch of the solution set shall be within **twenty (20) calendar days** from receipt of Notice to Proceed (NTP).

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The delivery and application of the remaining seven (7) batches of solution sets must be completed within two (2) months from the delivery and application of the first (1st) batch of the solution set. Consequently, application timeline indicated in Section IV-C of the Project Requirements must be strictly followed.

V. Other Requirements

1. The Supplier shall submit a document stating that the product complies with the required technical specifications.
2. The product should have been tested and proven effective in treating wastewater. Results of analysis from DENR-Accredited Laboratory of past completed projects or product testing (i.e. before and after treatment/application of bioremediation solution) shall be presented.
3. The Supplier shall submit a certification stating that the product is environmentally safe (Material/Product Safety Data Sheet).
4. To ensure that the processes and procedures of the supplier has the quality, efficiency, consistency and safety with regards to the standards set forth by the International Organization for Standardization (ISO). The supplier shall submit the following ISO Certifications:
 - a. ISO 9001:2015 (Quality Management System)
 - b. ISO 14001:2015 (Environmental Management System)
5. The Supplier shall comply with the delivery schedule specified in the application timeline. Moreover, upon the receipt of NTP by the Supplier, the End User will send a formal letter indicating the dates of application of the project.
6. The Supplier may opt to lease a warehouse or stockroom where the bioremediation solution set will be prepared, OR the supplier may transport the prepared solution directly from their manufacturing plant to the identified application points in Estero de Kabulusan. Further, the product must be examined by the DENR Inspection Committee and the PRCMO representatives before application. Figure 2 is the map of the application points for reference.
7. Delivery fee and other applicable fees (i.e. energy cost for equipment) shall be included in the unit cost of the product.
8. For the assessment of the product efficiency and technical report requirements, joint-sampling between DENR-PRCMO and the Supplier shall be done to ensure the integrity of samples of both parties. The Supplier shall shoulder the expenses incurred for the laboratory analysis of their collected samples. Further, laboratory analysis of collected water samples shall be done by a Department of Environment and Natural Resources (DENR) recognized and accredited laboratory. In this regard, the Supplier shall also

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submit a photocopy of the certificate of the laboratory as a DENR-recognized laboratory as an attachment to the Final Report.

VI. Duties and Responsibilities of DENR-PRCMO

1. Duly assigned PRCMO-WQWMD personnel shall coordinate with barangays along Estero de Kabulusan before the application of the bioremediation solution.
2. Duly assigned PRCMO-WQWMD personnel shall monitor and assist the Supplier in the application of the bioremediation solution in Estero de Kabulusan.
3. Duly assigned PRCMO-WQWMD personnel shall conduct water quality monitoring activities to assess the effectiveness of the product in treating Estero de Kabulusan.

VII. Terms of Payment

Payment shall be made based on the following:

1. Payment of 35% of total project cost shall be made after 50% delivery and application of desired number of bioremediation solution set, the issuance of the Certificate of Inspection and Acceptance by the DENR and the submission of Inspection Report by the supplier which shall include the following:
 - A. Background;
 - B. Product Description and Mechanism;
 - C. Target percentage reduction; and
 - D. Methodology indicating the application scheme specifically,
 - a. Water Quality Monitoring Stations and Application Points
 - b. Application Timeline and Dosage
 - c. Sampling Frequency
2. Payment of 50% of total project cost shall be made after 100% completion of delivery and application of desired number of bioremediation solution set, the issuance of the Certificate of Inspection and Acceptance by the DENR, and the submission of Final Report by the supplier which contains the following:
 - A. Summary of activities conducted in the implementation of the project;
 - B. Manual or procedural guidelines;
 - C. Technical analysis on Data and Results garnered in the Pre-Application Phase, Application Phase, and Post-Application Phase of the project and technical discussion of the Conclusion;
 - D. Results of Analysis (from DENR-recognized laboratory) including Certification of Laboratory Recognition for Water Analysis from DENR – EMB; and



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- E. Recommendations on issues encountered during implementation of the project and other areas for improvement.
3. The remaining 15% of the total project cost shall only be paid once the 25% fecal coliform reduction target is met. In case, additional application of bioremediation solution is needed in order to meet the 25% average reduction in fecal coliform, this shall be at no additional cost to the proponent.

Prepared by:


MA. RAISAH AVERIEL P. BALMES
Engineer IV

Reviewed by:


ANNE MARIE P. NILLES, EnP, MAURP
Chief Environmental Management Specialist

Approved by:


DR. JOAN A. LAGUNDA, MBA
Assistant Secretary for Administration and Legislative Affairs; and
Concurrent OIC Executive Director of Pasig River Coordinating and Management Office



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B. Other Requirements

1. Bidder has no overdue deliveries or unperformed services intended for DENR.
2. Bidder did not participate as a consultant in the preparation of the design or technical specification of the GOODS/SERVICES subject of the bid.

BIDDER’S UNDERTAKING

I/We, the undersigned bidder, having examined the Bidding Documents including Bid Bulletins, as applicable, hereby BID to (supply/deliver/perform/comply) the above Terms of Reference

I/We undertake, if our bid is accepted, to deliver the goods/services in accordance with the terms and conditions contained in the bid documents, including the posting of the required performance security within ten (10) calendar days from receipt of the Notice of Award.

Until a formal contract/order confirmation is prepared and signed, this Bid is binding on us.

Name of Company (in print)

Signature of Company Authorized Representative

Name & Designation (in print)

Date



Section VII. Technical Specifications



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**Section VII-A
(page 1 of 1)**

Technical Specifications

**Supply, Delivery and Application of Bioremediation Solution for the Water Quality Improvement
Lot No. 1 Estero de Magdalena (Phase III)**

Instruction to Bidders: Please fill up the form accordingly and sign the Bidder’s Undertaking. Failure to conform will result in a rating of “FAILED”.

TECHNICAL REQUIREMENTS	*Bidder’s Statement of Compliance
1. Composition of Solution	
<ul style="list-style-type: none"> Contains trillions of beneficial microorganisms specifically: Lactobacillus sp., Bacillus sp., Azospirillum sp., Saccharomyces sp., Bacterial count, Yeast count, etc. 	
<ul style="list-style-type: none"> Contains at least concentrated enzymes 	
2. Preparation of One (1) Solution Set	
<ul style="list-style-type: none"> One (1) set of Bioremediation Solution shall contain at least 2 kilograms of Bioremediation Solution powder which will be diluted to approximately 40 liters of unchlorinated water 	
3. Preparation of Solution to be Applied per day	
<ul style="list-style-type: none"> The desired number of sets per day will be combined and further diluted to make a bioremediation solution (i.e. On Day 1 of Week 1, at least 8 sets of bioremediation solution will be applied in different application points) 	

PLEASE INDICATE THE BRAND OF THE ITEM BEING OFFERED IN THE SPACE PROVIDED

I hereby certify to comply with the above Technical Specifications.

Name of Company (in print)

Signature of Company Authorized Representative

Name & Designation (in print)

Date

**Bidders must state here either “Comply” or “Not Comply” against each of the individual parameters of each Specification stating the corresponding performance parameter of the equipment offered. Statements of “Comply” or “Not Comply” must be supported by evidence in a Bidders Bid and cross-referenced to that evidence. Evidence shall be in the form of manufacturer’s un-amended sales literature, unconditional statements of specification and compliance issued by the manufacturer, samples, independent test data etc., as appropriate. A statement that is not supported by evidence or is subsequently found to be contradicted by the evidence presented will render the Bid under evaluation liable for rejection. A statement either in the Bidders statement of compliance or the supporting evidence that is found to be false either during Bid evaluation, post-qualification or the execution of the Contract may be regarded as fraudulent and render the Bidder or supplier liable for prosecution subject to the provisions of ITB a(ii) and/or GCC Clause (iii).*



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**Section VII-B
(page 1 of 1)**

Technical Specifications

**Supply, Delivery and Application of Bioremediation Solution for the Water Quality Improvement
Lot No. 2 Estero de Paco (Phase II)**

Instruction to Bidders: Please fill up the form accordingly and sign the Bidder’s Undertaking. Failure to conform will result in a rating of “FAILED”.

TECHNICAL REQUIREMENTS	*Bidder’s Statement of Compliance
1. Composition of Solution	
<ul style="list-style-type: none"> Contains trillions of beneficial microorganisms specifically: Lactobacillus sp., Bacillus sp., Azospirillum sp., Saccharomyces sp., Bacterial count, Yeast count, etc. Contains at least concentrated enzymes 	
2. Preparation of One (1) Solution Set <ul style="list-style-type: none"> One (1) set of Bioremediation Solution shall contain at least 2 kilograms of Bioremediation Solution powder which will be diluted to approximately 40 liters of unchlorinated water 	
3. Preparation of Solution to be Applied per day <ul style="list-style-type: none"> The desired number of sets per day will be combined and further diluted to make a bioremediation solution (i.e. On Day 1 of Week 1, at least 7 sets of bioremediation solution will be applied in different application points) 	

PLEASE INDICATE THE BRAND OF THE ITEM BEING OFFERED IN THE SPACE PROVIDED

I hereby certify to comply with the above Technical Specifications.

Name of Company (in print)

Signature of Company Authorized Representative

Name & Designation (in print)

Date

**Bidders must state here either “Comply” or “Not Comply” against each of the individual parameters of each Specification stating the corresponding performance parameter of the equipment offered. Statements of “Comply” or “Not Comply” must be supported by evidence in a Bidders Bid and cross-referenced to that evidence. Evidence shall be in the form of manufacturer’s un-amended sales literature, unconditional statements of specification and compliance issued by the manufacturer, samples, independent test data etc., as appropriate. A statement that is not supported by evidence or is subsequently found to be contradicted by the evidence presented will render the Bid under evaluation liable for rejection. A statement either in the Bidders statement of compliance or the supporting evidence that is found to be false either during Bid evaluation, post-qualification or the execution of the Contract may be regarded as fraudulent and render the Bidder or supplier liable for prosecution subject to the provisions of ITB a(ii) and/or GCC Clause (iii).*



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**Section VII-C
(page 1 of 1)**

Technical Specifications

**Supply, Delivery and Application of Bioremediation Solution for the Water Quality Improvement
Lot No. 3: Estero de Pandacan**

Instruction to Bidders: Please fill up the form accordingly and sign the Bidder's Undertaking. Failure to conform will result in a rating of "FAILED".

TECHNICAL REQUIREMENTS	*Bidder's Statement of Compliance
<p>1. Composition of Solution</p> <ul style="list-style-type: none"> Contains trillions of beneficial microorganisms specifically: Lactobacillus sp., Bacillus sp., Azospirillum sp., Saccharomyces sp., Bacterial count, Yeast count, etc. Contains at least concentrated enzymes 	
<p>2. Preparation of One (1) Solution Set</p> <ul style="list-style-type: none"> One (1) set of Bioremediation Solution shall contain at least 2 kilograms of Bioremediation Solution powder which will be diluted to approximately 40 liters of unchlorinated water 	
<p>3. Preparation of Solution to be Applied per day</p> <ul style="list-style-type: none"> The desired number of sets per day will be combined and further diluted to make a bioremediation solution (i.e. On Day 1 of Week 1, at least 8 sets of bioremediation solution will be applied in different application points) 	

PLEASE INDICATE THE BRAND OF THE ITEM BEING OFFERED IN THE SPACE PROVIDED

I hereby certify to comply with the above Technical Specifications.

Name of Company (in print)

Signature of Company Authorized Representative

Name & Designation (in print)

Date

**Bidders must state here either "Comply" or "Not Comply" against each of the individual parameters of each Specification stating the corresponding performance parameter of the equipment offered. Statements of "Comply" or "Not Comply" must be supported by evidence in a Bidders Bid and cross-referenced to that evidence. Evidence shall be in the form of manufacturer's un-amended sales literature, unconditional statements of specification and compliance issued by the manufacturer, samples, independent test data etc., as appropriate. A statement that is not supported by evidence or is subsequently found to be contradicted by the evidence presented will render the Bid under evaluation liable for rejection. A statement either in the Bidders statement of compliance or the supporting evidence that is found to be false either during Bid evaluation, post-qualification or the execution of the Contract may be regarded as fraudulent and render the Bidder or supplier liable for prosecution subject to the provisions of ITB a(ii) and/or GCC Clause (iii).*



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Section VII-D
(page 1 of 1)

Technical Specifications

Supply, Delivery and Application of Bioremediation Solution for the Water Quality Improvement
Lot No. 4: Estero de Kabulusan

Instruction to Bidders: **Please fill up the form accordingly and sign the Bidder's Undertaking. Failure to conform will result in a rating of "FAILED".**

TECHNICAL REQUIREMENTS	*Bidder's Statement of Compliance
1. Composition of Solution <ul style="list-style-type: none"> • Contains trillions of beneficial microorganisms specifically: Lactobacillus sp., Bacillus sp., Azospirillum sp., Saccharomyces sp., Bacterial count, Yeast count, etc. • Contains at least concentrated enzymes 	
2. Preparation of One (1) Solution Set <ul style="list-style-type: none"> • One (1) set of Bioremediation Solution shall contain at least 2 kilograms of Bioremediation Solution powder which will be diluted to approximately 40 liters of unchlorinated water 	
3. Preparation of Solution to be Applied per day <ul style="list-style-type: none"> • The desired number of sets per day will be combined and further diluted to make a bioremediation solution (i.e. On Day 1 of Week 1, at least 8 sets of bioremediation solution will be applied in different application points) 	

PLEASE INDICATE THE BRAND OF THE ITEM BEING OFFERED IN THE SPACE PROVIDED

I hereby certify to comply with the above Technical Specifications.

Name of Company (in print)

Signature of Company Authorized Representative

Name & Designation (in print)

Date

*Bidders must state here either "Comply" or "Not Comply" against each of the individual parameters of each Specification stating the corresponding performance parameter of the equipment offered. Statements of "Comply" or "Not Comply" must be supported by evidence in a Bidders Bid and cross-referenced to that evidence. Evidence shall be in the form of manufacturer's un-amended sales literature, unconditional statements of specification and compliance issued by the manufacturer, samples, independent test data etc., as appropriate. A statement that is not supported by evidence or is subsequently found to be contradicted by the evidence presented will render the Bid under evaluation liable for rejection. A statement either in the Bidders statement of compliance or the supporting evidence that is found to be false either during Bid evaluation, post-qualification or the execution of the Contract may be regarded as fraudulent and render the Bidder or supplier liable for prosecution subject to the provisions of ITB a(ii) and/or GCC Clause (iii).



Section VIII. Checklist of Technical and Financial Documents

**DENR BIDS AND AWARDS COMMITTEE****CHECKLIST OF TECHNICAL AND FINANCIAL DOCUMENTS**

Project: SUPPLY, DELIVERY AND APPLICATION OF BIOREMEDIATION SOLUTION FOR THE WATER QUALITY IMPROVEMENT OF VARIOUS ESTEROS

Bid Ref. No. Bid Ref. No. DENR-CO-2022-040 REBID

TOTAL APPROVED BUDGET FOR THE CONTRACT: ₱3,770,000.00

Please check the lot being bid	Lot No.	Description	Total ABC (₱)
<input type="checkbox"/>	1	Estero de Magdalena (Phase III)	900,000.00
<input type="checkbox"/>	2	Estero de Paco (Phase II)	890,000.00
<input type="checkbox"/>	3	Estero de Pandacan	1,000,000.00
<input type="checkbox"/>	4	Estero de Kabulusan	980,000.00
TOTAL			3,770,000.00

ENVELOPE 1: TECHNICAL COMPONENT**CLASS "A" DOCUMENTS****A. LEGAL DOCUMENTS**

(a) Valid and current Certificate of PhilGEPS Registration (Platinum Membership) (all pages) in accordance with Section 8.5.2 of the IRR (pursuant to GPPB Resolution No. 15-2021, dated 14 October 2021);

B. TECHNICAL DOCUMENTS

(b) Statement of all its ongoing government and private contracts, including contracts awarded but not yet started, if any, whether similar or not similar in nature and complexity to the contract to be bid (per **Annex I**);

(c) Statement of the Bidder's Single Largest Completed Contract (SLCC) of similar nature within the last five (5) years from date of submission and receipt of bids equivalent to at least fifty (50%) of the total ABC of the lot being bid. (per **Annex I-A**)

Similar in nature shall mean "Bioremediation Solution for Water Quality Improvement"

Any of the following documents must be submitted/attached corresponding to listed completed largest contracts per Annex I-A:

- i) Copy of End User's Acceptance; or
- ii) Copy of Official Receipt/s or Sales Invoice or Collection Receipt/s



(d) Original Bid Security must be issued in favor of the **DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES (DENR)** (must be valid for at least 120 calendar days from the date of bid opening); any one of the following forms:

Lot No.	Description	Project ABC (P)	Bid Security: Cash, Cashier's/ Manager's Check, Bank Draft / Guarantee, Irrevocable Letter of Credit (2%) (P)	Bid Security: Surety Bond (5%) (P)	Original Bid Securing Declaration
1	Estero de Magdalena (Phase III)	900,000.00	18,000.00	45,000.00	No required Amount
2	Estero de Paco (Phase II)	890,000.00	17,800.00	44,500.00	
3	Estero de Pandacan	1,000,000.00	20,000.00	50,000.00	
4	Estero de Kabulusan	980,000.00	19,600.00	49,000.00	
TOTAL		3,770,000.00	75,400.00	188,500.00	

1. Bid Securing Declaration per **Annex II**;
2. The Cashier's/Manager's Check shall be issued by a Local, Universal or Commercial Bank
3. The Bank Draft/Guarantee or Irrevocable Letter of Credit shall be issued by a Local Universal or Commercial Bank; or
4. Should bidder opt to submit a Surety Bond as Bid Security, the surety bond must be callable on demand and must be issued by a surety or insurance company duly certified by the Insurance Commission as authorized to issue such bond. Together with the surety bond, a certification from Insurance Commission must be submitted by the bidder which must state that the surety or insurance company is specifically authorized to issue surety bonds.
5. For submission of Bank Draft/Guarantee or Irrevocable Letter of Credit or Surety Bond, the following must be stated/specified in the Bid Security pursuant to Section III, ITB Clause 18.5, to wit:

The following are the grounds for forfeiture of Bid Security

▪ **IF A BIDDER:**

- a) Withdraws its bid during the period of bid validity.
- b) Does not accept the correction of errors pursuant to Section 32.2.1 of the IRR of RA 9184.
- c) Fails to submit the Post Qualification requirements within the prescribed period or a finding against their veracity thereof.
- d) Submission of eligibility requirements containing false information or falsified documents.
- e) Submission of bids that contain false information or falsified documents, or the concealment of such information in the bids in order to influence the outcome of eligibility screening or any other stage of the public bidding.
- f) Allowing the use of one's name, or using the name of another for purposes of public bidding.
- g) Withdrawal of a bid, or refusal to accept an award, or enter into contract with the Government without justifiable cause, after the Bidder had been adjudged as having submitted the Lowest Calculated and Responsive Bid.
- h) Refusal or failure to post the required performance security within the prescribed time.
- i) Refusal to clarify or validate in writing its bid during post-qualification within a period of seven (7) calendar days from receipt of the request for clarification.
- j) Any documented unsolicited attempt by a bidder to unduly influence the outcome of the bidding in his favor.
- k) Failure of the potential joint venture partners to enter into the joint venture after the bid is declared as successful.
- l) All other acts that tend to defeat the purpose of the competitive bidding, such as habitually withdrawing from bidding, submitting late Bids or patently insufficient bid, for at least three (3) times within a year, except for valid reasons.

▪ **IF THE SUCCESSFUL BIDDER:**

- a) fails to sign the contract in accordance with Section 40 of the Revised IRR of RA 9184; or
- b) fails to furnish performance security in accordance with Section 40 of the Revised IRR of RA 9184.



(e) Conformity with Schedule of Requirements and Technical Specifications, as enumerated and specified in **Sections VI and VII** of the Bidding Documents.

Lot No.		Form	Description
1	Estero dela Magdalena (Phase III)	Section VI-A	Schedule of Requirements
		Section VII-A	Technical Specifications
2	Estero de Paco (Phase II)	Section VI-B	Schedule of Requirements
		Section VII-B	Technical Specifications
3	Estero de Pandacan	Section VI-C	Schedule of Requirements
		Section VII-C	Technical Specifications
4	Estero de Kabulusan	Section VI-D	Schedule of Requirements
		Section VII-D	Technical Specifications

(f) Original **Omnibus Sworn Statement** in accordance with Section 25.3 of the IRR of RA 9184 and using the prescribed form attached as **Annex III** with attached **Proof of Authority of the bidder's authorized representative/s**:

- i. **FOR SOLE PROPRIETORSHIP (IF OWNER OPTS TO APPOINT A REPRESENTATIVE):** Notarized or unnotarized Special Power of Attorney.
- ii. **FOR CORPORATIONS, COOPERATIVE OR THE MEMBERS OF THE JOINT VENTURE:** Notarized or unnotarized Secretary's Certificate evidencing the authority of the designated representative/s.

Notes: *Should there be more than one (1) appointed authorized representatives, use the word "any of the following" or "OR", otherwise, all authorized representatives must sign/initial the bid submission.*

IN THE CASE OF UNINCORPORATED JOINT VENTURE: Each member shall submit a separate Special Power of Attorney and/or Secretary's Certificate evidencing the authority of the designated representative/s.

C. FINANCIAL DOCUMENTS

(g) Net Financial Contracting Capacity (NFCC) computation, in accordance with ITB Clause 5.5, (per **Annex IV**).

The NFCC computation must be equal to the ABC of the lot being bid. The detailed computation using the required formula must be provided.

OR

Original copy of Committed Line of Credit (CLC) per **Annex IV-A** issued by a Local Universal or Local Commercial Bank at least equal to ten percent (10%) of the of the lot being bid.

In case of Joint Venture, the partner responsible to submit the NFCC shall likewise submit the Statement of all its ongoing contracts and the Latest Audited Financial Statements.



Class “B” Document: (For Joint Venture)

If applicable, For Joint Ventures, Bidder to submit either:

- (i) Copy of the JOINT VENTURE AGREEMENT (JVA) in case the joint venture is already in existence, or
- (ii) Copy of Protocol/Undertaking of Agreement to Enter into Joint Venture (**Annex V**) signed by all the potential joint venture partners stating that they will enter into and abide by the provisions of the JVA in the instance that the bid is successful and must be in accordance with Section 23.1 (b) of the IRR

In case the joint venture is not yet in existence, the submission of a valid JVA shall be within ten (10) calendar days from receipt by the bidder of the notice from the BAC that the bidder is the Lowest Calculated and Responsive Bid [Sec 37.1.4 (a) (i)]

(h) The JVA or the Protocol/Undertaking of Agreement to Enter into Joint Venture (per Annex V) must include/specify the company/partner and the name of the office designated as authorized representative of the Joint Venture.

ENVELOPE 2: FINANCIAL COMPONENT

- (a) Completed and signed Financial Bid Form. Bidder must use, accomplish and submit the following Bid Forms:

Lot No.	Form
1	Annex VI-1
2	Annex VI-2
3	Annex VI-3
4	Annex VI-4

and

- (b) Original of duly signed and accomplished Price Schedule(s) per lot being bid.:

Lot No.	Form
1	Annex VI-A-1 and/or Annex VI-B-1
2	Annex VI-A-2 and/or Annex VI-B-2
3	Annex VI-A-3 and/or Annex VI-B-3
4	Annex VI-A-4 and/or Annex VI-B-4

The ABC is inclusive of VAT. Any proposal with a financial component exceeding the ABC shall not be accepted.



Section IX. Prescribed/Sample Forms

**(Bidder's Company Letterhead)**

**SUPPLY, DELIVERY AND APPLICATION OF BIOREMEDIATION SOLUTION FOR THE
WATER QUALITY IMPROVEMENT OF VARIOUS ESTEROS
Bid Ref. No. DENR-CO-2022-040 REBID**

Please check the lot being Bid	Lot No.	Description	Project ABC (₱)
<input type="checkbox"/>	1	Estero de Magdalena (Phase III)	900,000.00
<input type="checkbox"/>	2	Estero de Paco (Phase II)	890,000.00
<input type="checkbox"/>	3	Estero de Pandacan	1,000,000.00
<input type="checkbox"/>	4	Estero de Kabulusan	980,000.00

Statement of All Ongoing Government and Private Contracts, including contracts awarded but not yet started, if any, within the Last Three (3) Years

NAME OF CLIENT	NAME OF THE CONTRACT	DATE AND STATUS OF THE CONTRACT	KINDS OF GOODS	AMOUNT OF CONTRACT	VALUE OF OUTSTANDING CONTRACTS	DATE OF DELIVERY	PURCHASE ORDER NUMBER/S OR DATE OF CONTRACT/S
TOTAL							

CERTIFIED CORRECT:

Name & Signature of Authorized Representative

Position

Date

**(Bidder's Company Letterhead)****SUPPLY, DELIVERY AND APPLICATION OF BIOREMEDIATION SOLUTION FOR THE WATER QUALITY IMPROVEMENT OF VARIOUS ESTEROS
Bid Ref. No. DENR-CO-2022-040 REBID**

Please check the lot being Bid	Lot No.	Description	Project ABC (₱)	50% of the ABC
<input type="checkbox"/>	1	Estero de Magdalena (Phase III)	900,000.00	450,000.00
<input type="checkbox"/>	2	Estero de Paco (Phase II)	890,000.00	445,000.00
<input type="checkbox"/>	3	Estero de Pandacan	1,000,000.00	500,000.00
<input type="checkbox"/>	4	Estero de Kabulusan	980,000.00	490,000.00

Statement of Single Largest Completed Contract of Similar Nature within the Last Five (5) Years from date of submission and receipt of bids

Single completed contract of similar nature amounting to at least fifty percent (50%) of the ABC of the lot being bid;

NAME OF CLIENT	NAME OF THE CONTRACT	DATE OF THE CONTRACT	KINDS OF GOODS	AMOUNT OF CONTRACT	DATE OF DELIVERY	SALES INVOICE/OFFICIAL RECEIPT NO./COLLECTION RECEIPT NO. & DATE OR END USER'S ACCEPTANCE DATE (Please attach)

CERTIFIED CORRECT:

Name & Signature of Authorized Representative

Position

Date

**Annex II**

**SUPPLY, DELIVERY AND APPLICATION OF BIOREMEDIATION SOLUTION FOR THE
WATER QUALITY IMPROVEMENT OF VARIOUS ESTEROS
Bid Ref. No. DENR-CO-2022-040 REBID**

Please check the lot being Bid	Lot No.	Description	Project ABC (₱)
<input type="checkbox"/>	1	Estero de Magdalena (Phase III)	900,000.00
<input type="checkbox"/>	2	Estero de Paco (Phase II)	890,000.00
<input type="checkbox"/>	3	Estero de Pandacan	1,000,000.00
<input type="checkbox"/>	4	Estero de Kabulusan	980,000.00

REPUBLIC OF THE PHILIPPINES)
CITY OF _____) S.S.

BID-SECURING DECLARATION

To: DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES (DENR)

I/We, the undersigned, declare that:

1. I/We understand that, according to your conditions, bids must be supported by a Bid Security, which may be in the form of a Bid-Securing Declaration.
2. I/We accept that: (a) I/we will be automatically disqualified from bidding for any contract with any procuring entity for a period of two (2) years upon receipt of your Blacklisting Order; and, (b) I/we will pay the applicable fine provided under Section 6 of the Guidelines on the Use of Bid Securing Declaration¹, within fifteen (15) days from receipt of the written demand by the procuring entity for the commission of acts resulting to the enforcement of the bid securing declaration under Sections 23.1 (b), 34.2, 40.1, and 69.1, except 69.1 (f) of the IRR of RA 9184; without prejudice to the other legal action the government may undertake.
3. I/We understand that this Bid-Securing Declaration shall cease to be valid on the following circumstances:
 - (a) Upon expiration of the bid validity period, or any extension thereof pursuant to your request;
 - (b) I am/we are declared ineligible or post-disqualified upon receipt of your notice to such effect, and (i) I/we failed to timely file a request for reconsideration or (ii) I/we filed a waiver to avail of said right;
 - (c) I am/we are declared as the bidder with the Single/Lowest Calculated and Responsive Bid, and I/we have furnished the performance security and signed the Contract.

IN WITNESS WHEREOF, I/We have hereunto set my/our hand/s this ____ day of [month] [year] at [place of execution].

[Insert NAME OF BIDDER'S
AUTHORIZED REPRESENTATIVE]
[Insert signatory's legal capacity]
Affiant

[Jurat]

[Format shall be based on the latest Rules on Notarial Practice]

**Annex III**

(Page 1 of 2)

SUPPLY, DELIVERY AND APPLICATION OF BIOREMEDIATION SOLUTION FOR THE WATER QUALITY IMPROVEMENT OF VARIOUS ESTEROS**Bid Ref. No. DENR-CO-2022-040 REBID**

Please check the lot being Bid	Lot No.	Description	Project ABC (₱)
<input type="checkbox"/>	1	Estero de Magdalena (Phase III)	900,000.00
<input type="checkbox"/>	2	Estero de Paco (Phase II)	890,000.00
<input type="checkbox"/>	3	Estero de Pandacan	1,000,000.00
<input type="checkbox"/>	4	Estero de Kabulusan	980,000.00

Omnibus Sworn Statement

REPUBLIC OF THE PHILIPPINES)
CITY/MUNICIPALITY OF _____) S.S.

AFFIDAVIT

I, *[Name of Affiant]*, of legal age, *[Civil Status]*, *[Nationality]*, and residing at *[Address of Affiant]*, after having been duly sworn in accordance with law, do hereby depose and state that:

1. Select one, delete the other:

If a sole proprietorship: I am the sole proprietor or authorized representative of *[Name of Bidder]* with office address at *[address of Bidder]*;

If a partnership, corporation, cooperative, or joint venture: I am the duly authorized and designated representative of *[Name of Bidder]* with office address at *[address of Bidder]*;

2. Select one, delete the other:

If a sole proprietorship: As the owner and sole proprietor, or authorized representative of *[Name of Bidder]*, I have full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for *[Name of the Project]* of the *[Name of the Procuring Entity]*, as shown in the attached duly notarized *Special Power of Attorney*;

If a partnership, corporation, cooperative, or joint venture: I am granted full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for *[Name of the Project]* of the *[Name of the Procuring Entity]*, as shown in the attached *[state title of attached document showing proof of authorization (e.g., duly notarized Secretary's Certificate, Board/Partnership Resolution, or Special Power of Attorney, whichever is applicable);]*;

3. *[Name of Bidder]* is not "blacklisted" or barred from bidding by the Government of the Philippines or any of its agencies, offices, corporations, or Local Government Units, foreign government/foreign or international financing institution whose blacklisting rules have been recognized by the Government Procurement Policy Board; by itself or by relation, membership, association, affiliation, or controlling interest with another blacklisted person or entity as defined and provided for in Uniform Guidelines on Blacklisting;

4. Each of the documents submitted in satisfaction of the bidding requirements is an authentic copy of the original, complete, and all statements and information provided therein are true and correct;

5. *[Name of Bidder]* is authorizing the Head of the Procuring Entity or its duly authorized representative(s) to verify all the documents submitted;



Annex III

(Page 2 of 2)

6. Select one, delete the rest:

If a sole proprietorship: The owner or sole proprietor is not related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

If a partnership or cooperative: None of the officers and members of [Name of Bidder] is related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

If a corporation or joint venture: None of the officers, directors, and controlling stockholders of [Name of Bidder] is related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

7. [Name of Bidder] complies with existing labor laws and standards; and

8. [Name of Bidder] is aware of and has undertaken the following responsibilities as a Bidder:

- a) Carefully examine all of the Bidding Documents;
- b) Acknowledge all conditions, local or otherwise, affecting the implementation of the Contract;
- c) Made an estimate of the facilities available and needed for the contract to be bid, if any; and
- d) Inquire or secure Supplemental/Bid Bulletin(s) issued for the [Name of the Project].

9. [Name of Bidder] did not give or pay directly or indirectly, any commission, amount, fee, or any form of consideration, pecuniary or otherwise, to any person or official, personnel or representative of the government in relation to any procurement project or activity.

10. In case advance payment was made or given, failure to perform or deliver any of the following obligations and undertakings in the contract shall be sufficient grounds to constitute criminal liability for Swindling (Estafa) or the commission of fraud with unfaithfulness or abuse of confidence through misappropriating or converting any payment received by a person or entity under an obligation involving the duty to deliver certain goods or services, to the prejudice of the public and the government of the Philippines pursuant to Article 3154 of Act No. 3815 s. 1930, as amended, or the Revised Penal Code.

IN WITNESS WHEREOF, I have hereunto set my hand this ___ day of ___, 20__ at _____, Philippines.

[Insert NAME
OF BIDDER'S
AUTHORIZED REPRESENTATIVE]
[Insert signatory's legal capacity]
Affiant

[Jurat]

[Format shall be based on the latest Rules on Notarial Practice]

**Annex IV****(Bidder's Company Letterhead)****SUPPLY, DELIVERY AND APPLICATION OF BIOREMEDIATION SOLUTION FOR THE WATER QUALITY IMPROVEMENT OF VARIOUS ESTEROS
Bid Ref. No. DENR-CO-2022-040 REBID**

Please check the lot being Bid	Lot No.	Description	Project ABC (₱)
<input type="checkbox"/>	1	Estero de Magdalena (Phase III)	900,000.00
<input type="checkbox"/>	2	Estero de Paco (Phase II)	890,000.00
<input type="checkbox"/>	3	Estero de Pandacan	1,000,000.00
<input type="checkbox"/>	4	Estero de Kabulusan	980,000.00

**NET FINANCIAL CONTRACTING CAPACITY COMPUTATION
(Please show figures at how you arrived at the NFCC)**

Our **Net Financial Contracting Capacity (NFCC)** which is at least equal to the total ceiling price we are bidding is computed as follows:

CA	=	Current Assets	₱
LESS			-
CL	=	Current Liabilities	₱
		Sub-total 1	₱
			X 15
		Sub-total 2	₱
LESS			-
C	=	Value of all outstanding or uncompleted portions of the project under on-going contracts, including awarded contracts yet to be started coinciding with the contract for this Project	₱
NET FINANCIAL CONTRACTING CAPACITY			₱

Name & Signature of Authorized Representative

Position / Date

Notes:

- 1) The value of the bidder's current assets and current liabilities must be based on the latest Audited Financial Statements submitted to the BIR.
- 2) The value of all outstanding or uncompleted contracts refers to those listed in **Annex I**
- 3) The detailed computation using the required formula must be shown as provided for in **Annex IV**.
- 4) The NFCC computation must at least be equal to the sum of ABC of the project.



Sample Form

(BANK'S LETTER HEAD)

(Name of Bank)

COMMITTED LINE OF CREDIT CERTIFICATE

Date: _____

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

DENR Main Building, DENR Compound
Visayas Avenue, Diliman, Quezon City

Contract/Project	:	_____
Company/Firm	:	_____
Address	:	_____
Bank/Financing Institution	:	_____
Address	:	_____
Amount	:	_____

This is to certify that the above Bank/Financing Institution with business address indicated above, commits to provide the (Supplier/Distributor/Manufacturer/Contractor), if awarded the above-mentioned Contract, a credit line in the amount specified above which shall be exclusively used to finance the performance of the above-mentioned Contract subject to our terms, conditions and requirements.

The credit line shall be available within fifteen (15) calendar days after receipt by the (Supplier/Distributor/Manufacturer/Contractor) of the Notice of Award and such line of credit shall be maintained until issuance of Certificate of Acceptance of DENR authorized representative/s.

This Certification is being issued in favor of said (Supplier/Distributor/Manufacturer/Contractor) in connection with the bidding requirement of the Department of Environment and Natural Resources for the above-mentioned Contract. We are aware that any false statements issued by us make us liable for perjury.

This committed line of credit cannot be terminated or cancelled without the prior written approval of the Department of Environment and Natural Resources.

Name and Signature of Authorized Financing Institution Office

Official Designation

Concurred by:

Name and Signature of (Supplier/Distributor/Manufacturer/Contractor's) Authorized Representative

Official Designation

[Jurat]

[Format shall be based on the latest Rules on Notarial Practice]

**SUPPLY, DELIVERY AND APPLICATION OF BIOREMEDIATION SOLUTION FOR THE WATER QUALITY IMPROVEMENT OF VARIOUS ESTEROS**
Bid Ref. No. DENR-CO-2022-040 REBID

Please check the lot being Bid	Lot No.	Description	Project ABC (₱)
<input type="checkbox"/>	1	Estero de Magdalena (Phase III)	900,000.00
<input type="checkbox"/>	2	Estero de Paco (Phase II)	890,000.00
<input type="checkbox"/>	3	Estero de Pandacan	1,000,000.00
<input type="checkbox"/>	4	Estero de Kabulusan	980,000.00
TOTAL			3,770,000.00

PROTOCOL/UNDERTAKING OF AGREEMENT TO ENTER INTO JOINT VENTURE

This **PROTOCOL/UNDERTAKING OF AGREEMENT TO ENTER INTO JOINT VENTURE**, executed by:..... a sole proprietorship/partnership/corporation duly organized and existing under and by virtue of the laws of the Philippines, with offices located at, represented herein by its, hereinafter referred to as “.....”;

-and-

..... a sole proprietorship/partnership/corporation duly organized and existing under and by virtue of the laws of the Philippines, with offices located at, represented herein by its, hereinafter referred to as “.....”;

For submission to the **Bids and Awards Committee** of the **Department of Environment and Natural Resources**, pursuant to **Section 23.1 (b)** of the Revised Implementing Rules and Regulations (IRR) of Republic Act (RA) No. 9184.

WITNESSETH That:

WHEREAS, the Parties desire to participate as a joint venture in the public bidding that will be conducted by the **Department of Environment and Natural Resources** pursuant to Republic Act No. 9184 and its implementing rules and regulations, with the following particulars:

Bid Reference No.	
Name/Title of Procurement Project	
Approved Budget for the Contract	

NOW THEREFORE, in consideration of the foregoing, the Parties undertake to enter into a **JOINT VENTURE** and sign a **Joint Venture Agreement** relative to their joint cooperation for this bid project, in the event that their bid is successful, furnishing the **DENR BAC** a duly signed and notarized copy thereof within **ten (10) calendar days** from receipt of Notice from the BAC that our bid has the lowest calculated responsive bid or highest rated responsive bid (as the case may be).



Annex V
(Page 2 of 2)

For purposes of this bid project, and unless modified by the terms of the Joint Venture Agreement, the following party shall be the authorized representative of the JV:

JV Partner (Name of Company):

Authorized Representative of the JV Partner: (Per attached Secretary's Certificate)

Name

Designation

That furthermore, the parties agree to be bound jointly and severally under the said Joint Venture Agreement;

THAT Finally, failure on our part to enter into the Joint Venture and/or sign the Joint Venture Agreement for any reason after the Notice of Award has been issued by shall be a ground for non-issuance by DENR of the Notice to Proceed, forfeiture of our bid security and such other administrative and/or civil liabilities as may be imposed by DENR under the provisions of R.A. 9184 and its Revised IRR, without any liability on the part of DENR.

This Undertaking shall form an integral part of our Eligibility documents for the above-cited project.

IN WITNESS WHEREOF, the parties have signed this Protocol/Undertaking on the date first above-written.

JV Partner 1's Representative/Authorized Signatory

JV Partner 2's Representative/Authorized Signatory

[Jurat]

[Format shall be based on the latest Rules on Notarial Practice]

**Annex VI-1**

(page 1 of 2)

SUPPLY, DELIVERY AND APPLICATION OF BIOREMEDIATION SOLUTION FOR THE WATER QUALITY IMPROVEMENT OF VARIOUS ESTEROS**Bid Ref. No. DENR-CO-2022-040 REBID****Lot No. 1: Estero de Magdalena (Phase III)****Bid Form**

To: **DENR Bids and Awards Committee**
DENR-Central Office
 DENR Main Building, DENR Compound,
 Visayas Avenue, Diliman, Quezon City

Gentlemen and/or Ladies:

I/We, having examined the Philippine Bidding Documents (PBDs) including the Supplemental or Bid Bulletin, *if any*, the receipt of which is hereby acknowledge, I/We, the undersigned offer to *supply/deliver/perform the following* in conformity with the said PBDs for the sum specified in the table below or the total calculated bid price, as evaluated and corrected for computational errors, and other bid modifications in accordance with the Price Schedules attached herewith and made part of this bid. The total bid price includes the cost of all applicable taxes, which are itemized herein or in the Price Schedules.

Description	Unit/Qty.	ABC (₱)	Financial Bid (₱)
Supply, Delivery and Application of Bioremediation Solution for the Water Quality Improvement of Estero De Magdalena (Phase III)	1 lot	900,000.00	
TOTAL BID PRICE (Amount in Words): _____			

Note: Please indicate "0" or "-" for item/s offered for free to the DENR. Incomplete financial proposal shall be considered non-responsive and thus, automatically disqualified in accordance with Section 32.2.1 (a) of the 2016 Revised IRR of RA 9184.

If our Bid is accepted, we undertake:

- to deliver the goods on accordance with the delivery schedules specified in the Schedule of Requirements of the PBDs;
- to provide a performance security in the form, amounts, and within the times prescribed in the PBDs ;
- to abide by the Bid Validity Period specified in the PBDs and it shall remain bidding upon us at any time before the expiration of that period.



Annex VI-1

(page 2 of 2)

Until a formal Contract is prepared and executed, this Bid, together with your written acceptance thereof and your Notice of Award, shall be binding upon us.

I/We understand that you are not bound to accept the Lowest Calculated Bid or any Bid you may receive.

I/We certify/confirm that we comply with the eligibility requirements pursuant to the PBDs.

The undersigned is authorized to submit the bid on behalf of the company as evidences by the attached Secretary's Certificate/Board of Resolution/Special Power of Attorney.

I/We acknowledge that failure to sign each and every page of this Bid Form, including the attached Schedule of Prices, shall be a ground for the rejection of our bid.

Name of Company (in print)

Signature of Company Authorized Representative

Name & Legal Capacity (in print)

Duly Authorized to sign for and behalf of:

Date

**Annex VI-2**

(page 1 of 2)

SUPPLY, DELIVERY AND APPLICATION OF BIOREMEDIATION SOLUTION FOR THE WATER QUALITY IMPROVEMENT OF VARIOUS ESTEROS**Bid Ref. No. DENR-CO-2022-040 REBID****Lot No. 2: Estero de Paco (Phase II)****Bid Form**

To: **DENR Bids and Awards Committee**
DENR-Central Office
 DENR Main Building, DENR Compound,
 Visayas Avenue, Diliman, Quezon City

Gentlemen and/or Ladies:

I/We, having examined the Philippine Bidding Documents (PBDs) including the Supplemental or Bid Bulletin, *if any*, the receipt of which is hereby acknowledge, I/We, the undersigned offer to *supply/deliver/perform the following* in conformity with the said PBDs for the sum specified in the table below or the total calculated bid price, as evaluated and corrected for computational errors, and other bid modifications in accordance with the Price Schedules attached herewith and made part of this bid. The total bid price includes the cost of all applicable taxes, which are itemized herein or in the Price Schedules.

Description	Unit/Qty.	ABC (P)	Financial Bid (P)
Supply, Delivery and Application of Bioremediation Solution for the Water Quality Improvement of Estero de Paco (Phase II)	1 lot	890,000.00	
TOTAL BID PRICE (Amount in Words): _____			

Note: Please indicate "**0**" or "**-**" for item/s offered for free to the DENR. Incomplete financial proposal shall be considered non-responsive and thus, automatically disqualified in accordance with Section 32.2.1 (a) of the 2016 Revised IRR of RA 9184.

If our Bid is accepted, we undertake:

- to deliver the goods on accordance with the delivery schedules specified in the Schedule of Requirements of the PBDs;
- to provide a performance security in the form, amounts, and within the times prescribed in the PBDs ;
- to abide by the Bid Validity Period specified in the PBDs and it shall remain bidding upon us at any time before the expiration of that period.



Annex VI-2

(page 2 of 2)

Until a formal Contract is prepared and executed, this Bid, together with your written acceptance thereof and your Notice of Award, shall be binding upon us.

I/We understand that you are not bound to accept the Lowest Calculated Bid or any Bid you may receive.

I/We certify/confirm that we comply with the eligibility requirements pursuant to the PBDs.

The undersigned is authorized to submit the bid on behalf of the company as evidences by the attached Secretary's Certificate/Board of Resolution/Special Power of Attorney.

I/We acknowledge that failure to sign each and every page of this Bid Form, including the attached Schedule of Prices, shall be a ground for the rejection of our bid.

Name of Company (in print)

Signature of Company Authorized Representative

Name & Legal Capacity (in print)

Duly Authorized to sign for and behalf of:

Date

**Annex VI-3**

(page 1 of 2)

SUPPLY, DELIVERY AND APPLICATION OF BIOREMEDIATION SOLUTION FOR THE WATER QUALITY IMPROVEMENT OF VARIOUS ESTEROS**Bid Ref. No. DENR-CO-2022-040 REBID****Lot No. 3: Estero de Pandacan****Bid Form**

To: **DENR Bids and Awards Committee**
DENR-Central Office
 DENR Main Building, DENR Compound,
 Visayas Avenue, Diliman, Quezon City

Gentlemen and/or Ladies:

I/We, having examined the Philippine Bidding Documents (PBDs) including the Supplemental or Bid Bulletin, *if any*, the receipt of which is hereby acknowledge, I/We, the undersigned offer to *supply/deliver/perform the following* in conformity with the said PBDs for the sum specified in the table below or the total calculated bid price, as evaluated and corrected for computational errors, and other bid modifications in accordance with the Price Schedules attached herewith and made part of this bid. The total bid price includes the cost of all applicable taxes, which are itemized herein or in the Price Schedules.

Description	Unit/Qty.	ABC (P)	Financial Bid (P)
Supply, Delivery and Application of Bioremediation Solution for the Water Quality Improvement of Estero de Pandacan	1 lot	1,000,000.00	
TOTAL BID PRICE (Amount in Words): _____			

Note: Please indicate "0" or "-" for item/s offered for free to the DENR. Incomplete financial proposal shall be considered non-responsive and thus, automatically disqualified in accordance with Section 32.2.1 (a) of the 2016 Revised IRR of RA 9184.

If our Bid is accepted, we undertake:

- to deliver the goods on accordance with the delivery schedules specified in the Schedule of Requirements of the PBDs;
- to provide a performance security in the form, amounts, and within the times prescribed in the PBDs ;
- to abide by the Bid Validity Period specified in the PBDs and it shall remain bidding upon us at any time before the expiration of that period.



Annex VI-3

(page 2 of 2)

Until a formal Contract is prepared and executed, this Bid, together with your written acceptance thereof and your Notice of Award, shall be binding upon us.

I/We understand that you are not bound to accept the Lowest Calculated Bid or any Bid you may receive.

I/We certify/confirm that we comply with the eligibility requirements pursuant to the PBDs.

The undersigned is authorized to submit the bid on behalf of the company as evidences by the attached Secretary's Certificate/Board of Resolution/Special Power of Attorney.

I/We acknowledge that failure to sign each and every page of this Bid Form, including the attached Schedule of Prices, shall be a ground for the rejection of our bid.

Name of Company (in print)

Signature of Company Authorized Representative

Name & Legal Capacity (in print)

Duly Authorized to sign for and behalf of:

Date

**Annex VI-4**

(page 1 of 2)

SUPPLY, DELIVERY AND APPLICATION OF BIOREMEDIATION SOLUTION FOR THE WATER QUALITY IMPROVEMENT OF VARIOUS ESTEROS**Bid Ref. No. DENR-CO-2022-040 REBID****Lot No. 4: Estero de Kabulusan****Bid Form**

To: **DENR Bids and Awards Committee**
DENR-Central Office
 DENR Main Building, DENR Compound,
 Visayas Avenue, Diliman, Quezon City

Gentlemen and/or Ladies:

I/We, having examined the Philippine Bidding Documents (PBDs) including the Supplemental or Bid Bulletin, *if any*, the receipt of which is hereby acknowledge, I/We, the undersigned offer to *supply/deliver/perform the following* in conformity with the said PBDs for the sum specified in the table below or the total calculated bid price, as evaluated and corrected for computational errors, and other bid modifications in accordance with the Price Schedules attached herewith and made part of this bid. The total bid price includes the cost of all applicable taxes, which are itemized herein or in the Price Schedules.

Description	Unit/Qty.	ABC (P)	Financial Bid (P)
Supply, Delivery and Application of Bioremediation Solution for the Water Quality Improvement of Estero De Kabulusan	1 lot	980,000.00	
TOTAL BID PRICE (Amount in Words): _____			

Note: Please indicate "0" or "-" for item/s offered for free to the DENR. Incomplete financial proposal shall be considered non-responsive and thus, automatically disqualified in accordance with Section 32.2.1 (a) of the 2016 Revised IRR of RA 9184.

If our Bid is accepted, we undertake:

- to deliver the goods on accordance with the delivery schedules specified in the Schedule of Requirements of the PBDs;
- to provide a performance security in the form, amounts, and within the times prescribed in the PBDs ;
- to abide by the Bid Validity Period specified in the PBDs and it shall remain bidding upon us at any time before the expiration of that period.



Annex VI-4

(page 2 of 2)

Until a formal Contract is prepared and executed, this Bid, together with your written acceptance thereof and your Notice of Award, shall be binding upon us.

I/We understand that you are not bound to accept the Lowest Calculated Bid or any Bid you may receive.

I/We certify/confirm that we comply with the eligibility requirements pursuant to the PBDs.

The undersigned is authorized to submit the bid on behalf of the company as evidences by the attached Secretary's Certificate/Board of Resolution/Special Power of Attorney.

I/We acknowledge that failure to sign each and every page of this Bid Form, including the attached Schedule of Prices, shall be a ground for the rejection of our bid.

Name of Company (in print)

Signature of Company Authorized Representative

Name & Legal Capacity (in print)

Duly Authorized to sign for and behalf of:

Date



Annex VI-A-1

(page ___ of ___)

**SUPPLY, DELIVERY AND APPLICATION OF BIOREMEDIATION SOLUTION
FOR THE WATER QUALITY IMPROVEMENT**

Lot No. 1 : Estero de Magdalena (Phase III)

Bid Ref. No. DENR-CO-2022-040 Rebid

Price Schedule for Goods Offered from Within the Philippines

[shall be submitted with the Bid if bidder is offering goods from within the Philippines]

For Goods Offered from Within the Philippines

1	2	3	4	5	6	7	8	9	10
Item	Description	Country of origin	Quantity	Unit price EXW per item	Transportation and all other costs incidental to delivery, per item	Sales and other taxes payable if Contract is awarded, per item	Cost of Incidental Services, if applicable, per item	Total Price, per unit (col 5+6+7+8)	Total Price delivered Final Destination (col 9) x (col 4)

Name of Company (in print)

Signature of Company Authorized Representative

Name & Legal Capacity (in print)

Duly Authorized to sign for and behalf of:

Date



Annex VI-A-2

(page ___ of ___)

SUPPLY, DELIVERY AND APPLICATION OF BIOREMEDIATION SOLUTION FOR THE WATER QUALITY IMPROVEMENT

Lot No. 2 : Estero de Paco (Phase II)

Bid Ref. No. DENR-CO-2022-040 Rebid

Price Schedule for Goods Offered from Within the Philippines

[shall be submitted with the Bid if bidder is offering goods from within the Philippines]

For Goods Offered from Within the Philippines

1	2	3	4	5	6	7	8	9	10
Item	Description	Country of origin	Quantity	Unit price EXW per item	Transportation and all other costs incidental to delivery, per item	Sales and other taxes payable if Contract is awarded, per item	Cost of Incidental Services, if applicable, per item	Total Price, per unit (col 5+6+7+8)	Total Price delivered Final Destination (col 9) x (col 4)

Name of Company (in print)

Signature of Company Authorized Representative

Name & Legal Capacity (in print)

Duly Authorized to sign for and behalf of:

Date



Annex VI-A-3

(page ___ of ___)

SUPPLY, DELIVERY AND APPLICATION OF BIOREMEDIATION SOLUTION FOR THE WATER QUALITY IMPROVEMENT

Lot No. 3 : Estero de Pandacan

Bid Ref. No. DENR-CO-2022-040 Rebid

Price Schedule for Goods Offered from Within the Philippines

[shall be submitted with the Bid if bidder is offering goods from within the Philippines]

For Goods Offered from Within the Philippines

1	2	3	4	5	6	7	8	9	10
Item	Description	Country of origin	Quantity	Unit price EXW per item	Transportation and all other costs incidental to delivery, per item	Sales and other taxes payable if Contract is awarded, per item	Cost of Incidental Services, if applicable, per item	Total Price, per unit (col 5+6+7+8)	Total Price delivered Final Destination (col 9) x (col 4)

Name of Company (in print)

Signature of Company Authorized Representative

Name & Legal Capacity (in print)

Duly Authorized to sign for and behalf of:

Date

**Annex VI-A-4**

(page ___ of ___)

**SUPPLY, DELIVERY AND APPLICATION OF BIOREMEDIATION SOLUTION
FOR THE WATER QUALITY IMPROVEMENT****Lot No. 4 : Estero de Kabulusan****Bid Ref. No. DENR-CO-2022-040 Rebid****Price Schedule for Goods Offered from Within the Philippines***[shall be submitted with the Bid if bidder is offering goods from within the Philippines]***For Goods Offered from Within the Philippines**

1	2	3	4	5	6	7	8	9	10
Item	Description	Country of origin	Quantity	Unit price EXW per item	Transportation and all other costs incidental to delivery, per item	Sales and other taxes payable if Contract is awarded, per item	Cost of Incidental Services, if applicable, per item	Total Price, per unit (col 5+6+7+8)	Total Price delivered Final Destination (col 9) x (col 4)

Name of Company (in print)

Signature of Company Authorized Representative

Name & Legal Capacity (in print)

Duly Authorized to sign for and behalf of:

Date



Annex VI-B-1

(page ___ of ___)

SUPPLY, DELIVERY AND APPLICATION OF BIOREMEDIATION SOLUTION FOR THE WATER QUALITY IMPROVEMENT

Lot No. 1: Estero de Magdalena (Phase III)

Bid Ref. No. DENR-CO-2022-040 Rebid

Approved Budget for the Contract – ₱3,770,000.00

Price Schedule for Goods Offered from Abroad

[shall be submitted with the Bid if bidder is offering goods from Abroad]

For Goods Offered from Abroad

1	2	3	4	5	6	7	8	9
Item	Description	Country of origin	Quantity	Unit price CIF port of entry (specify port) or CIP named place (specify border point or place of destination)	Total CIF or CIP price per item (col. 4 x 5)	Unit Price Delivered Duty Unpaid (DDU)	Unit price Delivered Duty Paid (DDP)	Total Price delivered DDP (col 4 x 8)

Name of Company (in print)

Signature of Company Authorized Representative

Name & Legal Capacity (in print)

Duly Authorized to sign for and behalf of:

Date



Annex VI-B-2

(page ___ of ___)

SUPPLY, DELIVERY AND APPLICATION OF BIOREMEDIATION SOLUTION FOR THE WATER QUALITY IMPROVEMENT

Lot No. 2: Estero de Paco (Phase II)

Bid Ref. No. DENR-CO-2022-040 Rebid

Approved Budget for the Contract – ₱3,770,000.00

Price Schedule for Goods Offered from Abroad

[shall be submitted with the Bid if bidder is offering goods from Abroad]

For Goods Offered from Abroad

1	2	3	4	5	6	7	8	9
Item	Description	Country of origin	Quantity	Unit price CIF port of entry (specify port) or CIP named place (specify border point or place of destination)	Total CIF or CIP price per item (col. 4 x 5)	Unit Price Delivered Duty Unpaid (DDU)	Unit price Delivered Duty Paid (DDP)	Total Price delivered DDP (col 4 x 8)

Name of Company (in print)

Signature of Company Authorized Representative

Name & Legal Capacity (in print)

Duly Authorized to sign for and behalf of:

Date

**Annex VI-B-3**

(page ___ of ___)

SUPPLY, DELIVERY AND APPLICATION OF BIOREMEDIATION SOLUTION FOR THE WATER QUALITY IMPROVEMENT**Lot No. 3: Estero de Pandacan****Bid Ref. No. DENR-CO-2022-040 Rebid****Approved Budget for the Contract – ₱3,770,000.00****Price Schedule for Goods Offered from Abroad***[shall be submitted with the Bid if bidder is offering goods from Abroad]***For Goods Offered from Abroad**

1	2	3	4	5	6	7	8	9
Item	Description	Country of origin	Quantity	Unit price CIF port of entry (specify port) or CIP named place (specify border point or place of destination)	Total CIF or CIP price per item (col. 4 x 5)	Unit Price Delivered Duty Unpaid (DDU)	Unit price Delivered Duty Paid (DDP)	Total Price delivered DDP (col 4 x 8)

Name of Company (in print)

Signature of Company Authorized Representative

Name & Legal Capacity (in print)

Duly Authorized to sign for and behalf of:

Date



Annex VI-B-4

(page ___ of ___)

SUPPLY, DELIVERY AND APPLICATION OF BIOREMEDIATION SOLUTION FOR THE WATER QUALITY IMPROVEMENT

Lot No. 4: Estero de Paco

Bid Ref. No. DENR-CO-2022-040 Rebid

Approved Budget for the Contract – ₱3,770,000.00

Price Schedule for Goods Offered from Abroad

[shall be submitted with the Bid if bidder is offering goods from Abroad]

For Goods Offered from Abroad

1	2	3	4	5	6	7	8	9
Item	Description	Country of origin	Quantity	Unit price CIF port of entry (specify port) or CIP named place (specify border point or place of destination)	Total CIF or CIP price per item (col. 4 x 5)	Unit Price Delivered Duty Unpaid (DDU)	Unit price Delivered Duty Paid (DDP)	Total Price delivered DDP (col 4 x 8)

Name of Company (in print)

Signature of Company Authorized Representative

Name & Legal Capacity (in print)

Duly Authorized to sign for and behalf of:

Date



Annex VII

**(BIDDER'S CLIENT'S
COMPANY LETTERHEAD)**

CERTIFICATE OF PERFORMANCE EVALUATION

*[To be issued by the **Bidder's Client** specified in Annex I-A (Single Largest Completed Contract) on the performance of the product supplied / delivered by the prospective bidder]*

This is to certify that (NAME OF BIDDER) has supplied our company/agency with (Name of Product/s) . Based on our evaluation on timely delivery, compliance to specifications and performance, warranty and after sales service, we give (NAME OF BIDDER) a rating of:

- EXCELLENT
- VERY SATISFACTORY
- SATISFACTORY
- POOR

This Certification shall form part of the Post-Qualification Documentary Requirements in line with (Name of Bidder) participation in the bidding for the **SUPPLY, DELIVERY AND APPLICATION OF BIOREMEDIATION SOLUTION FOR THE WATER QUALITY IMPROVEMENT OF VARIOUS ESTEROS.**

Issued this _____ day of _____ 2022 in _____, Philippines

Name of Company (Bidder's Client)

Full Name of Authorized Representative

Address

Signature of Authorized Representative

Tel. No./Fax

E-mail Address



(Bidder's Company Letterhead)

Please check the lot being Bid	Lot No.	Description	Project ABC (₱)
<input type="checkbox"/>	1	Estero de Magdalena (Phase III)	900,000.00
<input type="checkbox"/>	2	Estero de Paco (Phase II)	890,000.00
<input type="checkbox"/>	3	Estero de Pandacan	1,000,000.00
<input type="checkbox"/>	4	Estero de Kabulusan	980,000.00

SUPPLY, DELIVERY AND APPLICATION OF BIOREMEDIATION SOLUTION FOR THE WATER QUALITY IMPROVEMENT OF VARIOUS ESTEROS
Bid Ref. No. DENR-CO-2022-040 REBID

COMPANY PROFILE

COMPANY NAME : _____

ADDRESS : _____

HEAD OFFICE : _____

BRANCH : _____

TELEPHONE NUMBER/S : _____

HEAD OFFICE : _____

BRANCH : _____

FAX NUMBER/S : _____

HEAD OFFICE : _____

BRANCH : _____

E-MAIL ADDRESS/ES : _____

NUMBER OF YEARS IN BUSINESS : _____

NUMBER OF EMPLOYEES : _____

LIST OF MAJOR STOCKHOLDERS : _____

LIST OF BOARD OF DIRECTORS : _____

LIST OF KEY PERSONNEL (NAME & DESIGNATION WITH SIGNATURE) AS AUTHORIZED CONTACT PERSONS FOR THIS PROJECT [at least THREE (3)] : _____

CERTIFIED CORRECT:

Name & Signature of Authorized Representative

Position

Date