Section VI. Terms of Reference

I.   PROJECT TITLE:

DEVELOPMENT OF MANAGEMENT INFORMATION SYSTEM FOR CERTIFICATE OF PUBLIC CONVENIENCE AND OTHER RELATED APPLICATIONS (CPC-MIS)

II. PROJECT PROPONENT:

NATIONAL WATER RESOURCES BOARD

Address: 8th Floor NIA Building, EDSA, Quezon City

Contact Person: Atty. RICKY A. ARZADON, CESO IV

Designation: OIC, Executive Director

Tel No: 89202641/ 89283265   Fax No: 89202641

III. RATIONALE/BACKGROUND :

Water is a basic human need. The National Water Resources Board (NWRB), as the national coordinating agency for all water resources development and management, manages and regulates all water resources and services in the country. One of NWRB's primary mandates is economic regulation wherein it authorizes the operation of water supply systems of private water service providers/utilities.

Pursuant to its mandate as a regulator of water utilities as provided for under Sec. 2 of P.D. 424 (Creating the National Water Resources Council) in relation to Secs. 13, 14, & 16 of C.A. No. 146, as amended (Public Service Law), the NWRB continuously find ways to safeguard the quality of service that the Water Service Providers (WSPs) render to the public, even after their Certificate of Public Convenience (CPC) have been granted and particularly during the period of effectivity of the CPCs.

The provision of clean, safe, and reliable water is a fundamental responsibility of WSPs. They play a critical role in providing water to the public, and their performance is essential in ensuring effective and efficient water service delivery. To ensure the sustainable use and management of water resources, it is necessary to have an effective system for managing the operations of waterworks systems with CPC. Currently, the filing of applications for CPC is done manually,

which is time-consuming and prone to errors. To address this challenge, a CPC-MIS has to be developed.

V. OBJECTIVES

The objective of the project is the development of the NWRB Management Information System for Certificate of Public Convenience and other related applications (CPC-MIS) which automates the filing, screening, and processing of CPC and other CPC-related applications. Also, to provide timely information in relation to the processing and maintenance of CPC applications and compliances.

It bears emphasis that the grant or issuance of CPC is one of the major functions of the NWRB. In order to fulfill its mandate of providing safe water for all in an effective and sustainable manner, the internal processes that start from the filing of the application, evaluation, and the grant thereof must cope with present technology, thus migrating from manual filing and screening to automated filing and processing.

The NWRB continues with its efforts in addressing changes requiring ICT (Information and Communication Technology) to cope with the technicalities of modern times. The key frontline and common services and operations of the Agency need to be strengthened and the efficiency and effectiveness in the management of its processes improved.

VI. SCOPE OF WORK

This section discusses the scope of services to be provided by the Consultant/software provider. To promote gender equality, the project will pool diverse consultants composed of qualified men and women professionals who are experts and skilled in their chosen fields. It will take into consideration the gender-specific needs, roles, and perspectives in the planning, implementation, and evaluation of water-related initiatives to ensure equitable and sustainable outcomes.

The Consultant shall be responsible for providing a developed NWRB Management Information System for Certificate of Public Convenience and other related applications (CPC-MIS) with integrative and modular application program interface (API) capabilities for its operational processes with the following tasks:

1. General Requirements

(a) Provide NWRB a complete CPC-MIS mobile application, provided that the system shall be responsive to most devices and browsers to eliminate

the restriction to mobile app only, also working on web-based modality and programming interface, its requirements as specified in the technical specification;

(b) Formulate a Web-Based Development Plan/Work Plan ensuring different parts of the system work together seamlessly.;

(c) Compatibility with Windows OS is preferred and/or compatibility shall be available to all platforms/operating systems, provide NWRB the required Operating System and other related software needed to run the system at no additional cost to NWRB;

(d) Deploy, test, and evaluate the CPC-MIS in terms of functionality, stability, ease of use, performance, and security through the conduct of a series of application tests;

(e) Coordinate with NWRB end-users and address their requirements on specific transactions, queries, and reports per module;

(f) Coordinate with NWRB's Information Systems Analysts regarding on-site data center and server access during systems installation, implementation, deployment, testing, and maintenance;

(g) Establish end-user database and application system access control levels;

(h) Provide NWRB training for end-users in the proper usage of the system and conduct technology transfer and other related activities;

(i) Provide NWRB technical training and operations and systems manual regarding the system's build-from-scratch procedure;

(j) Provide NWRB the complete source code, timeline of development, end-user-approved users' manual, and related documentation of the entire system as discussed in the Special Terms and Conditions;

(k) The Consultant must provide system updates and a monthly maintenance program in the proposal, during the warranty period after the completion of the project for a period of three (3) years;

(l) Coordinate with WRIS – ICT pertaining to the documentation of all bugs, errors, and/or system crashes/failures and corresponding fixes/solutions to be part of the troubleshooting guide of the systems during development and after the warranty period. Also, the Consultant shall train the representative of the Water Resources Information Section (WRIS) of NWRB in troubleshooting;

(m) Data Migration from the existing system to the proposed system;

(n) Procurement of 3 units of laptop and 4 units of desktop with Windows OS; 1 unit of Tablet; 1 unit of mobile phone; 1 unit of an all-in-one printer with automatic document feeder; 1-unit duplex sheet-fed document scanner and 2 units of all-in-one printers. The equipment specification shall be subject to the approval of the NWRB. These equipment and software shall be turned over to the NWRB upon completion of the Project;

(o) The system must have provision for back-up of data in case of failure of hardware or other contingencies. The consultant must provide tools for data backup, archiving, and data recovery.

The Consultant shall carry out the following activities during data migration of existing data into the application database:

a) Study and prepare the data migration strategy/plan;
b) Identify the data elements (both from manual records and digital data) to be uploaded based on business requirements;
c) Prepare templates for data collection from manual records and circulate them to relevant business owners;
d) Prepare master data format and schematics;
e) Provide training to business owner staff in data collection and verification of manual records;
f) Guide NWRB in data digitization and cleansing before data uploading;
g) Migrate data from any existing system/tool to the application solution.

For the CPC database, the following shall be the specific tasks and responsibilities of the consultants:

a) Conduct a thorough analysis of the NWRB's requirements and propose a suitable database solution;
b) Develop user-friendly interfaces for data entry, data retrieval, and reporting;
c) Implement appropriate security measures to protect the database from unauthorized access and ensure data confidentiality;
d) Provide training sessions to data users on database usage, administration, and maintenance;
e) Import and migrate existing data into the new database, ensuring data integrity and consistency;
f) Fully functional database system with user interface and necessary integrations.

A. Quality Requirements

The Consultant shall perform Quality Assurance and Control in accordance with the Quality Management Plan.

The Consultant, with the NWRB TWG team, shall perform the following test on the integrated system to determine whether the software/application meets all the requirements mandated for operational acceptance. Successful completion of the contract shall be gauged through a series of formal system acceptance tests, but not limited to the following tests and sub-categories performed on all aspects of the system, as follows:

a) Database test to verify the complete and correct installation of the database management system and data integrity testing;
b) Data sampling – database back-up and recovery testing, query testing, database connection test.
c) Unit testing – each sub-module or component should be fully tested independently before integration
d) System test – to verify functionality and performance with respect to the requirements of the system covering defect test, housekeeping functions like archiving, easy-to-use GUIs, server, storage system shutdown and power up test, roll-back, system backup, and restoration test.
e) System integration test – covering the integration of testing component integration, testing system interfaces, parameter interfaces, procedure interfaces, message passing, validations, robustness, error detection, recovery testing, measuring response time, and throughput.
f) Security testing – authentication, authorization, time-out, penetration testing, security audits. It should be emphasized that the system shall be designed and developed in a secure manner, in such a way that NWRB information may not be accessible to the public
g) Stress, reliability and performance, consistency, recovery, volume, and limit tests
h) Audit trail – tracking critical transactions, logging all critical errors
i) Multi-user capability- test that the application system can support several users.

B. Support Requirements:

The consultant shall extend assistance to NWRB in the maintenance of CPC-MIS through:

o Establishment of operating helpdesk for NWRB including software change management during the duration of the project up to the warranty period. Technical Support and maintenance services must be 8 by 5 (8 hours per day, 5 days a week).
o Application System Maintenance and Technical Support for three (3) years (NOTE: refer to Section on Warranty).
o Capacity Building and Change Management services during the support period.

2. **Technical Requirements and Functional Features**

The NWRB Management Information System for Certificate of Public Convenience and other related applications (CPC-MIS) will have these features:

2.1 Technical Requirements

User Interface Platform

a) System Security
- Must have a built-in security layer for the system, roles, and user privileges
- Must provide user authentication and compliant with RA 10173 or the Data Privacy Act
- Must provide an audit trail on key transactions
- Must provide Entity Relationship Diagram Illustrations and Unified Modelling Language or key information about the project's database structure, showing the relationship between entities and their attributes should be included in the administration manual.

b) Integration and System Capabilities
- Must handle integration with existing systems;
- Must provide flexibility and scalability – the capability of the system to support business needs over its lifetime, available modules and add-on packages if required;
- It should be a web-based application available 24/7 and must be accessible using a web browser (latest version of Chrome, Firefox, Safari, and Internet Explorer) and link to the NWRB website;
- Must be capable of being accessed over a secured connection using HTTP/SSL protocol
- Must support multi-sessions, multi-processes and multi-instances
- Must provide comprehensive system and process documentation tools
- Must provide Business Analytics or Decision Support reports
  - Must support version management of metadata objects & configurations
  - Must have facility for offline forms input.

2.2 Testing environment should be installed locally and deployed on-premise at the NWRB Data Center which will also serve as a redundant and back-up image system file.

2.3 Unlimited number of users and should not require NWRB to make payment of any additional fees for adding any additional or new users to

the system in implementation, rollout, or subsequent phases. No additional cost must be incurred as the system grows and increases in the number of users, processors, and/or site installations should the systems require licensing for software used.

3.   Functional Requirements

- o Mobile application of CPC using different types of devices including walk-in clients, using kiosks, or with the assistance of the assigned NWRB personnel, provided that the system shall be responsive to most devices and browsers to eliminate the restriction to mobile app only;
- o Automatic creation of application/case number.
- o The system has a predefined list of required scanned documents for upload by the client/applicant and is configurable.
- o The system has a facility for reminding the client/applicant that original documents should be submitted.
- o The system will provide a message that the accomplished web form with the affidavit on the truthfulness of the information provided by the client/applicant is received by the office and is subject to evaluation.
- o The system is capable of displaying the workflow process and the status of the application can be viewed by the client/applicant.
- o Automatic integration of bills in iBARS/ERMS.
- o Generation of applications is allowed only if payment has been made using NWRB's required process of payment.
- o The system has a provision for generating and including QR codes in the application submitted by the client/applicant.
- o Identified monitoring reports can be generated at any time using report parameters (e.g. date range, applicant, the status of application, documents, etc.)
- o CPC analytics and dashboard can be generated at any time.
- o The system is capable of tracking the status of a particular application including tracing a particular application and its documents (Internal & External)

Major Tasks

The assignment will involve these major tasks:

1. Project inception and review of the existing system. Under this task, the Consultant will discuss with NWRB the objectives of the Project, the coverage, and the outputs expected from the project, including the piloting of the system.

This task involves familiarization with the processes related to the CPC application. Meetings and interviews with NWRB personnel must be conducted. Discussions will focus mainly on the current process flow, improvements and enhancements in the process, and the initial mechanics of the proposed system.

The Consultant will update their proposal and present the steps and timetable to complete the system in an inception report.

2. <u>Design of the proposed system</u>. This task involves summarizing the proposed functionality, improvements, and enhancements on the proposed system, and discussing and validating these with NWRB, if workable. The Consultants will develop a flow chart or some other representation of the system that will be used to discuss with the clients its structure, functionality, and linkages between the system and other management systems to be discussed and agreed upon. The Consultants will discuss the options and provide advice on proposed specifications for required software and hardware support for the system that will allow full use of the system.

The Developer may, at its discretion, offer additional value-added services to enhance the functionality, performance, or usability of the software beyond the scope of the Contract. Such VA may include but is not limited to optimization, security enhancement, and feature upgrades. The NWRB and the Developer shall mutually agree on the terms, scope, and associated costs of any VA provided.

In the development of the CPC-MIS, provisions for any cancellations and amendments in the application due to correction of the service area, proposed tariff, change in mailing address, etc. shall be considered. Likewise, the design of reports must be flexible for future revisions.

Once the proposed system has been cleared with NWRB, the Consultant will proceed to develop the system and its protocols – both the manual interface and automated procedures, including designing the corresponding forms and reports to be generated. Testing of the programs with the manual interfaces will be done under this task. The web-based CPC Management Information System developed must be compatible with the on-premise NWRB's server and the consultant will check the compatibility of the existing computers of the recipients.

A User Guide will be prepared to document the procedures and instructions for running the program, complete with sample reports/forms.

3. <u>Encoding/Updating/Migrating of the following database: (a) CPC and other CPC-related applications; (b) approved CPC; (c) Provisional</u>

Authority issued. The winning bidder must integrate/migrate/encode the existing list of CPC grantees and the CPC and other CPC-related applications including the data incorporated in the said grantees and applications.

The Consultant will provide the encoders and necessary equipment for database build-up at no additional cost to NWRB. It is understood that the necessary equipment for database build-up will not be purchased out of the cost of the project.

4. Piloting/Testing of the proposed system. After the programs and manual interfaces have been tested, NWRB will be trained on how to run and utilize the system. So that there will be no disruption to the running of the existing programs, a parallel run between the existing and new processes will be implemented over a period of three (3) months. This period will allow the preparation of refinements to the programs and manual procedures to be done before the final shift to the new system is done.

5. Training of NWRB personnel. The consultants will provide and conduct training needs to both men and women NWRB users and systems administrators. The series of training includes training of data controllers and data encoders, users' orientation seminars, hands-on user training, simulated sessions, user competence and confidence evaluation, refresher courses, and administrators' training. All the necessary supplies and materials, training needs of the client, and corresponding expenses of the training will be provided by the consultant.

6. Final report preparation. A final report will be prepared to document the different tasks undertaken, including an evaluation of the piloting of the system. This will include recommendations on manpower and financial resources needed to make the proposed system sustainable. The report will also include further enhancements that can be made for a subsequent phase of the system.

7. Technical Support. This includes periodic and emergency on-site and off-site support for the duration of the contract.

4.   Other Requirements:

- The system should be designed and developed in a secure manner wherein NWRB information may not be accessible to the public

- The consultant must provide a separate device/server as provided in Item 2.2 which is compliant/compatible with all hardware and software requirements to be installed.
- The consultant must provide the following additional equipment:

1) 3 units of laptop with the following specifications:
   - OS: Windows 11
     13th Gen Intel Core i7

   - Memory: 8GB DDR4 2400MHz
   - Video Card: Intel UHD Graphics 620 with shared graphic memory
   - 14-inch FHD (1920 x1080) IPS True-life LED-Backlit Narrow Border display
   - Hard Drive: 1TB SSD
   - MS Office 2021

2) 4 units of Desktop computers:
   - OS: Windows 11
   - Memory: 16GB DDR4 2133 MHz
   - Storage: 1TB SSD, 500 HDD
   - Graphics: NVIDIA GeForce GT 1030, 2 GDDRS
   - Optical Drive: 8X Super-Multi-drive, 9.0 mm slim tray load
   - Connectivity: 802 11ac/a/b/g/n wireless gigabit LAN and Bluetooth 4.0 LE
   - MS Office 2021

3) 1-unit Tablet
   - OS: Android 12.0
   - Display 12.4-inch
   - Processor: Snapdragon 8 Gen 1
   - Resolution: 2800 x 1752 pixels
   - RAM 8 GB
   - Storage 128 GB

4) 1-unit mobile phone
   - OS: Android 12.0
   - Memory: Storage 256 GB & RAM 6-8GB
   - Display: Screen size 6.5 inches

5) 1-unit All-in-One Printer with Auto Document Feeder (ADF)

- Multi-functional printer
- Resolution: 4800x1200 dpi
- No. of Paper Tray: 2
- Inkjet Printer
- Ultra-high page yield
- A3 printing
- Wi-Fi, Wi-Fi Direct, LAN, USB 2.0/3.0

6) 1-unit Duplex Sheet-fed Document Scanner

- Scan at speeds up to 85ppm/170ipm
- Max Document Size - Scan pages up to 215.9 mm x 6,096 mm (8.5 inches x 240 inches)
- Min Document Size – 50.8 x 50.8 mm (2 inches x 2 inches)
- Daily scan volume – up to 9,000 pages/day

7) 2 units All-in-One Printers
- USB 2.0/3.0 connectivity
- Printing resolution: 5,760 x 1,440 DPI
- Borderless printing up to 4R
- Multi-functional printer
- Fast printing speed
- Wi-Fi Direct

VII. SCHEDULE OF DELIVERABLES/OUTPUTS

Tasks	Deliverables	Due Date
1. Project inception	a) Project Inception Report with project plan and timeline b) Documentation of existing procedures and systems and proposed improvements c) Web Development Plan - Details on the project's goals, scope, and execution strategy - Website layout	Month 1

Tasks	Deliverables	Due Date
	- Functionality of all elements	
2. Development of proposed improvements on the database system	a) Proposed improvements for each of the modules, accepted by NWRB b) Report on the database system	Month 2-3
3. Testing of the system and data encoding	a) Data encoded on the database b) Modules are ready for testing and with NWRB approval c) Report on the testing of the database system	Month 4-5
4. User's training and implementation, parallel run (printing exercises and generation of various reports). 5. Training for Administrator	a) NWRB users trained. Modules are being implemented on a parallel run basis. b) Training on basic troubleshooting c) Administrator and maintenance procedures manual.	Month 6 -7
6. Presentation to users and MANCOM. Actual implementation 7. Submission of system documentation, User's Manuals, Source Code, or System Image	a) System Documentation b) User's Manual for each module and copy of source code or system image.	Month 8

IX. SPECIAL TERMS AND CONDITIONS

a. Timing/Assignment Duration

The engagement is expected to be completed over a period of eight (8) months.

b. Reporting

The task management and coordination of the assignment, including administrative and contractual obligations, shall be carried out by the Water Utilities Division, which is referred to as the NWRB Project Team and led by its Division Chief, in coordination with the other concerned divisions of the NWRB. For this purpose, there shall be formed an NWRB-IS Technical Working Group (TWG) whose members are the representatives from the different sections of the Water Utilities Division and other concerned divisions.

The TWG shall oversee the development of the project. It shall provide on-time, pertinent information and support that will be needed by the Consultant. It shall test modules of the system as soon as completed and recommends acceptance accordingly. The TWG and the Consultant shall meet bi-weekly or as needed to discuss the progress of the assignment.

The NWRB-IS TWG shall be composed of representatives from the following sections/divisions and shall be covered by an Office Memorandum:

- o Water Utilities Division – Registration and Licensing Section & Water Rates and Evaluation Section (7)

- o Policy & Program Division – Information Section (1)

- o Administrative & Financial Division – Accounting & Billing Section and Cashier (2)

The Consultant can use the NWRB premises during the development of the system. Once ready to be installed, NWRB and the consultant shall proceed with the implementation of the system at the NWRB Office. The encoding of the database shall be done at NWRB premises. The encoders shall bring their own device for encoding.

c. Documentation

The Consultant shall provide the following documentation in four sets of printed copies in addition to their electronic files in MS Word to be stored in an external portable drive:

- o User's Manuals (for all types of users)
- o Technical Reference Manuals (including Administrators and maintenance procedures manual)
- o Systems Manuals
- o Troubleshooting Guide
- o Backup Strategy
- o Program on System's Update and Monthly Maintenance Program after the warranty period

The manuals must be of durable construction with concise and high-quality presentation. They must contain sufficient information for the proper operation, maintenance, and reconfiguration of the programs.

Program source code, data files, and other support files essential for the operation of the CPC-MIS must be completely turned over to the TWG Team and the accepting party must be granted the right to modify the submitted files for the purposes of maintaining and/or upgrading the system. The program source code and system will be owned by NWRB and the Consultants cannot use these for any purpose other than for this project. The winning bidder shall ___turn over the source codes___ *for the developed CPC-MIS in a portable hard drive.*

d. Warranty

The Consultant shall provide _a three (3) year warranty on the system developed including annual payment of cloud subscription_. The warranty period will commence after formal acceptance of the system application software by the NWRB. This shall include free technical service and support to address various systems concerns including, but not limited to the following:

1. Fix bugs and/or errors that may arise from the intended use of the systems. This, however, will not include major revisions to the source codes of the systems;

2. Documentation of all bugs, errors, and/or system crashes/failures and corresponding fixes/solutions to be part of the troubleshooting guide of the systems after the warranty period;

3. The software will be free from material defects until the warranty period starting from the date of acceptance. This includes security against unauthorized access or hacking attempts. In the event of a security

breach, the Consultant commits to promptly rectify the breach at its own expense.

4. For System crashes, on-site support at the NWRB Data Bank Center where the system is housed is required within twenty-four (24) hours from receipt of a system crash report through phone and/or email;

5. For bugs and/or errors, a minimum of email and SMS support;

6. Technical Support

   i. The Technical Support period shall be the same period as that of the warranty provisions above.

   ii The Consultant shall provide telephone assistance and on-site technical support correcting any software malfunction or error that impairs the proper operation of the systems.

   iii. The NWRB User may contact the Consultant by telephone, mobile phone, fax, web and email from Monday to Friday, 8:00 AM to 5:00 PM.

7. Service Level Agreement

   1. On-site access to the NWRB Data Bank Center and servers during system installation, implementation, deployment, testing, and maintenance is allowed during workdays (Monday to Friday except for holidays) and work hours (8:00AM to 5:00PM) on the following conditions:

      ● Coordinated via telephone, email, or SMS to NWRB Data Bank Center at least prior to the scheduled activity and was acknowledged by both NWRB and the Consultant; and
      ● Must have prior approval from the NWRB's TWG member.
      ● Provide technical support and maintenance services in accordance with the warranty period. Response time for critical issues shall be within four (4) hours with round-the-clock (24/7) call support.

- Developer may, at its discretion, offer value-added (VA) services to enhance the functionality, performance, or usability of the Software, beyond the scope of the Contract.
- Such VA may include but are not limited to optimization, security enhancements, and feature upgrades. Client and Developer shall mutually agree on the terms, scope, and associated costs of any VA provided.
- The Software will be free from material defects until the warranty period from the date of acceptance. This includes security against unauthorized access or hacking attempts. In the event of a security breach, the Consultant commits to rectify the breach at its own expense promptly.
- May offer additional services to enhance the functionality, performance, or usability of the Software, beyond the scope of the Contract. This may include but is not limited to optimization, security enhancement, and feature upgrades.

8. The NWRB shall have full and exclusive ownership and title rights over the developed database including program source codes, and information/data gathered or submitted. Any modifications, updates, or improvements made to the database shall be the exclusive property of the NWRB. Third parties may not use, access, or reproduce the database without obtaining explicit written consent from NWRB. The database shall be considered confidential information, and any sharing of information regarding the database with external parties shall require prior written approval from NWRB.

e. **Payment Schedule**

Terms and Payment:

1. The NWRB shall pay an advance payment as mobilization fee of 10% of the contract price upon the submission of an irrevocable standby letter of credit of equivalent value from a commercial bank/bank guarantee or a surety bond callable upon demand, issued by a surety or insurance company duly licensed by the Insurance Commission.

2. Progress billings shall be paid upon receipt of the billings of the Consultant, subject to the recommendation of the Technical Working Group and acceptance of the end-user.

3. Recoupment of mobilization fee and 10% of the amount of progress billings shall be deducted from payments of the progress billings.

4. A Retention Fee of 10% of the contract shall be paid at least ninety (90) days after the completion of the project and FINAL ACCEPTANCE OF NWRB.

The payment for the project will be released upon acceptance by NWRB of the major deliverables specified below:

Major Deliverables	%
1. Advance Payment as Mobilization Fee	**10%**
2. Submission of Inception Report with Project Plan and Time Table (Mobilization) - Submission of 1st Progress Report *(To be submitted during the 1st month)*	**10%**
2. Submission of 2nd Progress Report - Documentation of existing procedures and systems and workflow - Development of Proposed Improvements - Delivery of Equipment *(To be submitted on the 3rd month)*	**15%**
3. Submission of 3rd Progress Report	**10%**

- Database encoding - Testing of modules and database system approved by the NWRB *(To be submitted on the 5th month)*	
4. Submission of 4th Progress Report - - Users' training and implementation, parallel run (printing exercises and generating various reports). - Training for Administrators on the use of the developed system - Testing/Refinement of the proposed improvements - Troubleshooting Guide/Back-up strategy *(To be submitted on the 7th month)*	**10%**
5. Submission of system documentation, User's Manuals, Source Code or System Image - Client testing and approval of the system (the system developed should be in place and fully operational) - Client's acceptance of the Final Report *(To be submitted on the 8th month)*	**35%**
6. Retention Fee - Approval and acceptance of the	**10%**

developed system	
TOTAL	**100%**

f. Required Qualifications and Experience

The Consultants to be selected shall be based on their qualifications, expertise, and experience, without any gender bias or discrimination. The NWRB is looking for a consultancy firm with the following qualifications:

1. Must be a registered business entity with valid documents such as DTI/SEC Registration, Business/Mayor's Permit, and BIR Certification of Registration and other requirements. In the case of foreign consultants, the foregoing document mentioned may be substituted by the appropriate equivalent documents, if any, issued by the foreign consultant's country.

2. Must present an existing/running application running in web technology such as PHP, ASP, Net, or Java that uses MSSQL Server 2012 (or higher version) as Database Server.

3. Must be familiar with and be able to understand the existing application system of NWRB. The consultant shall submit a Certification or Affidavit of Undertaking that the system they will develop can integrate with the existing application system of NWRB.

4. Must present an existing/running relevant application (prototype) that is related to this project, including any government office operation.

The proposed team will be part of the selected Consultant's technical and financial proposal, and should include the following:

1. **Project Manager**. The Project Manager shall oversee the project, liaise with NWRB, and ensure that NWRB's system requirements are appropriately addressed and implementation of the project is as scheduled. The candidate must have at least five years of experience as a Project Manager in Systems Development. Experience working in other countries would be an advantage. He/She will be responsible for the smooth transition to the

proposed system. He/She should have relevant experience in IT Systems Development.

2. **Business Analyst-** Responsible for documenting the existing processes, performing detailed requirement analysis, and identifying steps that need improvement under the guidance of the Project Manager, and in consultation with NWRB.

3. **Solution Architect/Full Stack Developer**. Graduate in computer science or any related degree course and have at least three years of relevant work experience in developing mobile applications. Responsible for coding and scripting the proposed system under the guidance of the Project Manager, and in consultation with NWRB. He/She should have professional certification from Microsoft.

4. **Quality Assurance Tester.** Graduate in computer science or any related degree course. The QA Tester shall test the functionality and usability of new or existing software to ensure it runs properly. He/She should have relevant experience in IT Systems review and assessment.

5. **Technical Writer**. The Technical Writer shall be responsible for documenting the system development and developing the User's Manual and finalizing this after a dry-run of the system is done with users. At least 2 years' experience as a Technical Writer.

g. Project Logistics

The operational base for the project is at the National Water Resources Board with office located at 8th Floor, NIA Building, EDSA, Quezon City.

Initially, the Project Consultants shall meet the NWRB Project Team to address concerns and gaps or improvements to the TOR and for a briefing on the conduct of the Project.

Likewise, the Project Consultants shall purchase the equipment and computer software (if there is any), including the cost of the license of the program/software to be used in the conduct of the project wherein the cost will be part of the contracted project cost. *The cost of the equipment, computer software, optical character recognition functionalities, and the server will be part of the contracted project cost.* The specifications of equipment shall be subject to NWRB approval. The equipment and software shall be turned over to NWRB

upon completion of the Project.

X. ESTIMATED PROJECT COST

Development of Management Information System for Certificate of Public Convenience and Other Related Applications (CPC-MIS) - **₱4.600M** (Annex 1)

This Terms of Reference is approved by:

Signature   : _____

Name   : **Atty. RICKY A. ARZADON, CESO IV**

Designation : OIC, Executive Director

Date of Signing: _____

ESTIMATED BUDGET REQUIREMENT

PROJECT TITLE: DEVELOPMENT OF CERTIFICATE OF PUBLIC CONVENIENCE MANAGEMENT INFORMATION SYSTEM (CPC-MIS)

1. Administrative Cost shall include the following:

1.A BASIC SALARY

Local Consultants	QTY	#MONTHS	SALARY	TOTAL BASIC SALARY
Project Team Leader/Manager	1	8		
Business Analyst	1	8		
Solution Architect/Full Stack Developer	1	8		
Quality Assurance Tester	1	8		
Technical Writer	1	6		
Data Encoder	1	6		
Admin. Assistant/Secretary	1	8		
Total				

TOTAL 1

2. MAINTENANCE AND OTHER OPERATING EXPENSES (MOOE):

Training/seminar expenses (Venue and Food) for 10 pax, i.e. testing, dry-run & actual run of the system (@3 trainings) for 3 days/training @ P___/head	10*3*3	days		
Communication Cost				
Handout Materials				
Office Supplies				
Transportation and other Expenses				

Conduct of TWG Meetings (10 pax @ P___/head)	1x/mo	7 months		
Sub-Total (MOOE) A				

Equipment	Qty.	Amount	Total Amount
Laptop	3		
Desktop	4		
Tablet	1		
Mobile Phone	1		
All-in-One Printer with Auto Document Feeder (ADF)	1		
Portable Document Scanner	1		
Printer	2		
Total cost of equipment			
Additional provision for inflation (10% of Total CO)			
Sub-Total (B)			

TOTAL 2 (A+B)

TOTAL ESTIMATED CONTRACT PRICE (1+2)

1. CONTINGENCY (1%)

TOTAL ESTIMATED COST OF CONSULTANCY (VAT INCLUSIVE)

TOTAL	**4.600 M**