

**Hydrological Database Support Services IDIQ  
Performance Work Statement  
Dated 12/16/2020**

**1.0 SCOPE**

1.1 **OBJECTIVE** - The objective of this performance-based contract is to maintain and further develop the Bureau of Reclamation's Hydrological Database (HDB) through the Contractor's provision of services for on-call technical support, troubleshooting of HDB malfunctions, development of modifications to HDB, support of HDB enhancements, and the development, documentation, and distribution of software applications that interface with HDB.

1.2 **BACKGROUND** - HDB is currently used in production in the Upper Colorado Region, in all four of its area offices, in the Lower Colorado Region in the Boulder Canyon Operations Area and Yuma Area Offices, in the Great Plains Region in the Eastern Colorado Area Office, in the Mid Pacific Region in the Lahontan Basin Area Office, and in the Pacific Northwest Region in the Klamath Basin Area Office. Each of these offices support separate instances of HDB for the collection and storage of vital hydrological data within their operational jurisdiction to aid in decision support and reporting for Reclamation facilities managed within each of these offices.

The HDB system is a critical decision support tool for day-to-day operations of many of Reclamation's major water storage and distribution facilities throughout the Western United States. HDB is critical for enabling and supporting ongoing modeling activities that including basin inflow forecasting, NEPA and ESA compliance processes as well as day-to-day operational control and management. HDB is also utilized to support Reclamation's website and other publicly available data portals such as RISE and RWIS.

The HDB is the foundation for Reclamation's Database of Record. As conceptualized by the Database of Record defining document, the driving vision for the Hydrologic Database is to:

- Consolidate data existing in various systems and personal spreadsheets.
- Assure complete and consistent data collection and storage; documentation of data sources.
- Provide historical information on other existing HDB data versions including information on when the data was either used or available for use.
- Perform as a means of quality control.
- Allow the user access, at any time interval, to the original source data for calculated or summarized data
- Provide for an automated generation of time-aggregated summary data as well as automated computations that compute data parameters based on collected inputs.

Reclamation managers are often interrogated formally or informally regarding the basis for operational decisions - decisions that are usually based on data such as forecasts, flows, available water supply and downstream demands. Reasonable explanation of decisions requires maintaining the exact data considered in the decision and being able to reproduce the overall state of the system and retrieve forecast information available at the time the decision was made. Enhanced capability to document the basis for the past decisions is urgently needed to assist Reclamation's defense in litigation and other processes.

Development of the database of record will facilitate Reclamation's ability to rely on and interpret their data in order to make sound operational decision, provide an indisputable record of data used to make past decisions, and provide a complete record of best available historical and forecast data for research proposed and policy development.

The HDB system is comprised of the Oracle based HDB database combined with a collection of software applications (computer programs) that are set up to automatically collect and store a variety of operational and hydrologic data from various data sources. Software applications within the system also allow operational staff to access the data for day to day operations and modeling of, dams, reservoirs and related features. These software applications collect and store data in to HDB while others allow it to be retrieved from HDB and displayed in ways that assist operation staff and the public to interpret the state of the hydrologic system.

## **2.0 REFERENCES**

### 2.2 References

- 2.2.1 Hydrological Database - Bureau of Reclamation  
<http://hydrodb.net>
- 2.2.2 National Environmental Policy Act  
<http://www.epa.gov/nepa>
- 2.2.3 Endangered Species Action  
[https://www.law.cornell.edu/wex/endangered\\_species\\_act\\_\(esa\)](https://www.law.cornell.edu/wex/endangered_species_act_(esa))

## **3.0 Definitions**

- 2.1.1 Qualified Contractor Personnel means those Contractor employees directly performing on this contract possess or obtain within 6 months of contract award all of the following skills, capabilities and knowledge in order to provide a high quality level of technical support services:
  - (a) High level of knowledge with regard to the HDB database structure, including database relationships in HDB, including DECODES and the Computational Processor.
  - (b) Full knowledge of the HDB objectives with respect to time-series data management including, but not limited to: computation management, interval data consistency, model data management, validation and quality assurance, etc.
  - (c) Expert-level knowledge of Oracle database programming, as well as in other computer programming languages such as JAVA, C, Perl, and VB.net.
- 2.1.2 Normal business hours are 8:00am-4:00pm, Monday through Friday, Mountain Standard Time excluding Federal Holidays.

## **4.0 TASKS - The contractor shall perform the following tasks:**

- 4.1 **Provide On-demand Technical Support.** Provide on-demand HDB technical support to Water Resources users. These services shall be provided by qualified Contractor personnel during normal Reclamation business hours and within the performance standards outlined in paragraph 5.0.
- 4.2 **Database System Maintenance and System Malfunction Resolution Services.** Troubleshoot, diagnose, and solve software and database management problems involving HDB system malfunctions as expeditiously as possible and within the performance standards outlined in paragraph 5.0.
- 4.3 **HDB Development, Coordination and Documentation.**
  - 4.3.1 Develop enhancements to HDB as requested by Reclamation's HDB Water Resources Group to be transferrable, functional, and available to other instances of HDB as requested by the Contracting Officer's Representative (COR) or Alternate COR (ACOR).
  - 4.3.2 Install and test available enhancements and regular updates to production and test databases, systems and applications at each HDB instance. All enhancements and modifications prepared by contractor shall be fully tested on a test environment maintained with the Reclamation network. Reclamation will be responsible to maintain the test environment and access to the Contractor for this purpose. Documentation of successful testing shall be submitted to Reclamation. Only after Reclamation review of testing results and approval by Reclamation shall contractor install enhancements or modifications onto HDB production environment.
  - 4.3.3 Integrate HDB enhancements and code modifications into the HDB source code and database scripts baseline.
  - 4.3.4 Maintain and support the HDB source code and the computation processor algorithms for HDB to be consistent as possible with other HDB installations.
  - 4.3.5 Coordinate openDCS development with the other participating entities.
  - 4.3.6 Provide download capabilities of HDB installation scripts, documentation and application software on the HDB web site.

**5.0 PERFORMANCE REQUIREMENTS SUMMARY** – The table below specifies the standards for satisfactory performance of the tasks specified in this performance work statement. Inspections will be based on the standards in the Performance Requirements Summary in the contract Statement of Work.

Task	Task Description	Performance Indicator	Performance Standard	Minimum Acceptable Quality Level
4.1	Provide on-demand HDB technical support to the users of HDB within Reclamation.	Timing of responses to calls from customer (Government Personnel) for technical assistance, questions and support.	<ol style="list-style-type: none"> <li>1) 50% of all calls are answered immediately by qualified Contractor personnel.</li> <li>2) 25% of all calls are returned within 2 hours by qualified Contractor personnel to the original caller. 100% of calls identified as “Urgent” are answered within 2 hours by qualified Contractor personnel to the original caller.</li> <li>3) 25% of all calls are returned within 24 hours by qualified Contractor personnel to the original caller.</li> </ol>	All customer calls shall be responded to within 24 hours of receipt from the contractor by qualified Contractor personnel to the original caller during regular business hours except for Fridays when 72 hours is permitted
4.2	Troubleshoot, diagnose, and solve software and database management problems involving HDB system malfunctions immediately after they occur.	Timing to diagnosed solution by contractor to reported HDB system malfunctions by customer.	<ol style="list-style-type: none"> <li>1) 75% of HDB system malfunctions are diagnosed by qualified Contractor personnel within 24 hours of being notified by Government personnel and resolved within 48 hours.</li> <li>2) 25% of HDB system malfunctions (more complex ones) are diagnosed by qualified Contractor personnel within 24 hours of being notified by Government personnel and resolved within 96 hours.</li> </ol>	All reported HDB system malfunctions shall be resolved within 5 business days unless extenuating circumstances exist.
4.3	Render additional services as specified in task orders issued	Task order specified deliverables will be completed and delivered as specified by task order.	Task order-specified deliverables are inspected, accepted, and subsequently delivered on a timely basis.	90% of all task order-specified deliverables are delivered on time and in acceptable form by Reclamation.
5.0	Reports	Reports will be reviewed quarterly by Reclamation for completeness, grammar, legibility and timely delivery.	All reports include the specified information, and are understandable, legible, and timely.	90% of all reports shall be delivered on time and in acceptable form Reclamation without need for revision.

**6.0 DATA, REPORTS AND DELIVERABLES** - The contractor shall prepare and submit monthly status reports to all participating Reclamation Offices, these reports shall contain the following information:

- Dates and approximate length of time (hours) required by contractor to resolve each incident for which on-demand HDB technical support services rendered by Contractor to Reclamation under this contract.
- Description of the issues involved for each reported incident requiring on-demand HDB technical support and the actions taken by the contractor to achieve a resolution of the reported incident.
- Details for all authorized Contractor travel associated with this contract such as dates, times, locations, specific costs, purposes of travel, and what contributions the Contractor provided as a result of the travel.
- For specific tasks described in each task order under this contract, the report should include the task order, a brief description of the overall task, and the status of performance and completion of the task, including a determination by the Contractor as to whether or not the task will be completed by the deadline specified in the associated task order.
- Task orders issued under this contract may include additional reporting requirements beyond those specified within this performance work statement.

## **7.0 TASK ORDERS**

- 7.1 The Contractor shall only perform tasks under this contract after the issuance of task orders.
- 7.2 It is anticipated that all task orders will be firm-fixed price. If circumstances warrant, task orders may be time-and-materials or labor-hour. The task order type will be specified in the Request for task order Proposal.
- 7.3 Activity Authorized to Issue Orders.
- 7.4 The Denver Acquisition Operation Bench office is the only authorized activity with authority to issue orders against this IDIQ.
- 7.5 All Reclamation Regions are authorized to use this IDIQ provided the work is inline with the PWS.
- 7.6 Task order's Scope and Frequency
- 7.7 The frequency of task orders for the Denver Office IT Support are anticipated on a yearly basis and may encompass multiple IT Labor Categories on a single task order.
- 7.8 The frequency of task orders for IT requirements beyond the Denver Office project from the regions and other offices are anticipated to be on an infrequent basis and the level of effort unknown until we start discovery.
- 7.9 Request for task order Proposal Process.

- 7.10** When the Government requires a task order, the Contract Specialist or Contracting Officer will submit a Request for task order Proposal to the Contractor. The Request for task order Proposal does not constitute an Order or Obligation. The Contractor shall not commence performance of any work or incur any costs related to the requirement until such time that a task order is signed and issued by the Contracting Officer. The Government's issuance of and the Contractor's response to a Request for task order Proposal does not guarantee the issuance of a task order. In response to the Request for task order Proposal, the Contractor shall submit the following no later than the due date specified in the Request for task order Proposal. The due date will be no sooner than ten (10) days (unless another number of days is mutually agreed upon by the Contracting Officer and the Contractor) after issuance of the Request for task order Proposal.
- 7.11** Upon receipt of the Contractor's proposal, the Government will evaluate the proposal and negotiate with the Contractor as needed. If the Government determines that negotiations are needed, then the Contractor shall negotiate in good faith to arrive at a mutually agreeable outcome and do so as expeditiously as practical. The Government will either issue a task order or notify the Contractor that a task order will not be issued no later than ten (10) days (unless another number of days is mutually agreed upon by the Contracting Officer and the Contractor) prior to the Period of Performance Start Date stated in the Request for task order proposal.
- 7.12** If the Request for task order Proposal is for a Firm-Fixed-Price type task order, the Contractor will be paid in accordance with 52.212-4(i) monthly. If the Request for task order Proposal is for a Time-and-Materials or Labor-Hour type task order, the Contractor will be paid in accordance with 52.212-4(i) Alternate I.
- 7.13** Pricing for "materials" as defined in FAR 16.601. If this includes travel, regardless of whether the task order is Firm-Fixed-Price or Time-and-Materials, travel will be reimbursed at cost and in accordance with FAR 31.205-46 and the Federal Travel Regulation. The amount proposed should be a not-to-exceed estimated amount with supporting documentation with the number of travelers, common carrier fares, local transportation costs (e.g. Privately-Owned Vehicle reimbursement), rental car expenses, per diem (i.e. lodging and subsistence), and miscellaneous & incidental expenses.