

TERMS OF REFERENCE FOR HYDROGEOLOGIST, SPMU, JAL JEEVAN MISSION, GOVT. OF ASSAM.

1.0 Background

Ministry of Jal Shakti was formed in June 2019 with two Departments: Department of Water Resources, River Development and Ganga Rejuvenation and Department of Drinking Water and Sanitation (DDWS). Jal Jeevan Mission (JJM) has been launched by Ministry of Jal Shakti, Government of India. JJM the flagship scheme of the Government seeks not only to provide functional household tap connections for all but also to promote the holistic management of local water resources. Under JJM water conservation, reuse measures are made mandatory to the scheme design. As per DDWS as on 31st March 2019, only 18.33 percent of rural households in the country, have Piped Water Supply (PWS). It has been planned to provide around 14.60 crore rural households with functional household tap connection (FHTC) through Jal Jeevan Mission (JJM) by 2024. In Assam, 34 percent of habitations are fully covered with piped water supply and only around 2.3 percent of total households have individual household pipe water supply connection. The goal is that every home gets drinking water in adequate quantity i.e. 55 liters per capita per day (lpcd) on a regular and long-term basis.

Various schemes and sub-missions under ester while NRDWP viz. Rural Water Supply and Sanitation Project for low income states (RWSSP-LIS), National Water Quality Sub-Mission (NWQSM), Japanese Encephalitis – Acute Encephalitis Syndrome (JE-AES), Swajal, Water Quality Monitoring and Surveillance (WQM&S) and all support activities under NRDWP has been subsumed into JJM. The JJM emphasises on community participation and making it as a movement- a Jan Aandolon. As per JJM guideline at grassroot level local communities especially women are to be encouraged to participate and take ownership of water resource management, water supply and grey water management and its reuse. The Implementation Support Agencies (ISA) like NGO, SHGs, CBOs, Voluntary Organisations, Trusts, Foundations will play critical role as partner of Government in mobilising and engaging the communities to plan, design, implement, manage, operate and maintain in village water supply infrastructure.

To achieve the objective of providing improved and sustainable drinking water services in rural communities through JJM, it is important to focus on water distribution networks, water quality management, source sustainability, sustainable service delivery (including operation and maintenance), building professional capacity and strengthening decentralized governance.

2.0 Objective of the position;

The objective of this position is to support the SPMU, Mission Directorate JJM to study the potential and quality of ground water sources in the state. In addition, interpret technical data and information from HGM maps and historical documents to build a conceptual model on feasibility and modality for tapping of ground water as a source for different water supply schemes proposed in the State under the Jal Jeevan Mission.

3.0 Reporting;

The Hydrogeologist will report to the Mission Director and the Additional Mission Director, SPMU, Jal Jeevan Mission, Assam

4.0 Scope of work

The Hydrogeologist shall;

- a. Undertake Reappraisal of Hydrogeological Surveys,
- b. Monitoring of Hydrograph Network Station.
- c. To undertake artificial recharge studies conjunctive use, water shed management pollution, mathematical modelling studies etc.
- d. Periodic Ground Water Resource assessment, data collection, preparation of hydrogeological maps, atlases.
- e. Prepare SOP for the Department for assessment of the potential water supplies (e.g. springs, ground water,) and, if a borehole is recommended, the preferred location(s) for borehole drilling, as well as recommend the most appropriate drilling methodology.
- f. Analyse data and report on findings including ground water potential and probable drilling sites on a case to case basis as when required by the client.
- g. Taking into account of the geological conditions and provide advice on the most appropriate drilling methodology and borehole construction methodology in order to build boreholes which maximize the yield.
- h. Develop an SOP for design of slot size of strainers with respected to aquifer strata characteristics as well as the shroud recommended.
- i. Ability towards analytical and creative thinking for rapid technical/mechanical solutions
- j. Good communicator with strong interpersonal and negotiations skills to deal with persons of various cultural and educational backgrounds.
- k. Proficiency in computer software such as Ground water modeling, MS Excel, Word, GIS.
- l. Excellent technical reporting skills. Languages: Excellent knowledge of English (written / oral / comprehension) is essential. Knowledge of Assamese will be an added advantage.
- m. Assist and advise the Department on use of geophysical equipment for assessment of ground water potential
- n. Work with the Department to evaluate the ground water potential based on HGM maps for all the districts of the state.
- o. Make analysis of rates for drilling by different types of rigs and up to different depths.

5.0. Qualifications

- a. Master of Science Degree in Geology or Applied Geology or Geo-exploration or Earth Science and Resource Management or Hydrogeology or Master of Technology in Engineering Geology from a recognized University.
- b. At least 5 years' experience of relevant field.
- c. Good oral and written communication skills. Should be fluent in English. Knowledge of Assamese is an advantage
- d. High level of interpersonal and management skills and ability to work with teams in the organisation at all levels
- e. Must be able to work under pressure and tight deadlines
- f. Computer knowledge and skills in MS Office (Powerpoint, MS Word, MS Excel) is a mandatory requirement.

6.0 Duty Station.

The Hydrogeologist will be stationed at the SPMU under the Mission Directorate JJM, Assam in Guwahati

7.0 Time Frame

Initially for one year which will be renewed based on performance and requirement of the project

8. Remuneration

The proposed remuneration will be in the range of Rs. 60000 to Rs. 80000 per Month (Inclusive of all incentives & perks). Salary is no bar for deserving candidates and will be commensurate with experience and previous salary.