

Water Quality Testing and Analysis for Development Phase Batch - X Schemes, Package 1

Status: Completed

Project Partner: Rural Water Supply and Sanitation Fund Development Board (RWSSFDB)

Project Area: Dolpa, Mugu, Jumla, Kalikot, Jajarkot, Rolpa, Rukum, Surkhet and Bardiya

Project Duration: 30 March, 2017 - 15 July, 2017

Aim:

To test the water quality of sources in order to determine whether water of acceptable quality could be delivered from the sources, and to propose appropriate protection measures for providing safe water.

Project Description:

The project aims to test the physico-chemical and microbiological characteristics of water samples and compare them with Nepal Drinking Water Quality Standards (NDWQS), 2062 and to evaluate its acceptability for drinking purpose. Besides, determination of Langelier Saturation Index (LSI) aims to describe any scaling or corrosion potential of the water samples. The sanitary inspections of the source are directed towards identification of any probable pollution sources and to recommend mitigation measures wherever necessary.



The project area includes Dolpa, Jumla, Mugu, Kalikot, Rukum, Rolpa, Surkhet, Jajarkot (gravity flow schemes) and Bardiya (ground water schemes) districts. Among the 107 schemes (4 ground water schemes and 103 gravity flow schemes), altogether 147 samples were collected, 138 proposed samples and 9 samples from new sources of project area.

Altogether 19 parameters namely pH, taste and odour, electrical conductivity, turbidity, colour, total dissolved solid, total alkalinity as CaCO₃, iron, calcium, ammonia, fluoride, nitrate, chloride, total hardness as CaCO₃, Manganese, Arsenic (only for Tube Well Schemes), Total Coliform and *E. coli* for the water samples were tested. For gravity flow schemes, LSI was also determined for the samples.

Project Outputs:

- Prepared a detail report regarding the physico-chemical and microbiological quality of the water source.
- Determined Langelier Saturation Index of the gravity flow schemes
- Identified sanitation condition of the source water

Major Achievements:

- Mapping of GPS point of the majority of the source and collection of the data using Kobo Toolbox.