



# Environmental Monitoring Report

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Project Number: 47229-001  
May 2017

Period: July 2016 – December 2016

## IND: Uttarakhand Emergency Assistance Project

Submitted by

Project Implementation Unit, Uttarakhand Jal Santhan, Jal Bhawan, Dehradun,  
Uttarakhand

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Asian Development Bank



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GM/AS

Ref: 84/PIU-UEAP/58/2017-18

Dated: 08/05/2017

To,

The Country Director  
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New Delhi - 110021.



**Sub.: Loan No. 3055 IND - Uttarakhand Emergency Assistance Project (UEAP) - FIFTH REPORT SEMI - ANNUAL ENVIRONMENT MONITORING REPORT (Period July to December 2016).**

Dear Ma'am,

With reference to above kindly find enclosed herewith FIFTH REPORT SEMI - ANNUAL ENVIRONMENT MONITORING REPORT (Period July to December 2016) for your review & approval.

**Enclosure: As above.**

Yours Sincerely

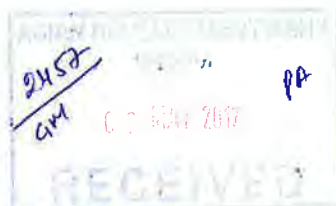
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**Uttarakhand Emergency Assistance Project (UEAP)  
Water Supply Sub-projects  
(ADB Loan No: 3055-IND)**



**FIFTH REPORT**  
**SEMI - ANNUAL ENVIRONMENT MONITORING REPORT**  
**(Period July to December 2016)**

**April 2017**

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## ABBREVIATIONS

ADB	Asian Development Bank
BOD	Bio Chemical Oxygen Demand
CO	Carbon Mono Oxide
CFE	Consent for Establishment
CH <sub>4</sub>	Methane
DO	Dissolve Oxygen
dB	Decibel
DSC	Design and Supervision Consultant
IEE	Initial Environmental Examination
EA	Executing Agency
EIA	Environmental Impact Assessment
EC	Environmental Clearance
GLSR	Ground Level Surface Reservoir
GoI	Government of India
GoU	Government of Uttarakhand
GR	Grievance Redressal
Ha	Hectare
HDPE	High Density Poly Ethylene
HFL	High Flood Level
Km	Kilometer
Leq	Equivalent continuous noise level
Mg	Milligram
MFF	Multitranchise Financing Facility
MoEF	Ministry of Environment & Forests
MLD	Million Litter Per day
Mn	Million
M	Meter
mm	Millimeter
mg/l	Milligram per Liter
m <sup>3</sup>	Cubic meter
NAAQS	National Ambient Air Quality Standards
NO <sub>x</sub>	oxides of Nitrogen
NA	Not Applicable
O & M	Operation and maintenance
PIU	Project Implementation Units
PM <sub>2.5</sub>	Particulate matter size less than 2.5µm
PM <sub>10</sub>	Particulate matter size less than 10µm
PMU	Project Management Unit
PPE	Personal Protective Equipments
PVC	Poly Vinyl Chloride
PWD	Public Works Division
RCC	Reinforced Cement Concrete
RoW	Right of Way
RP	Resettlement Plan
SBR	Sequential Batch Reactor
SC	Scheduled Castes
SEIAA	State Environment Impact Assessment Authority
SO <sub>2</sub>	Sulphur dioxides
SOP	Standard Operational Procedures
SPCB	State Pollution Control Board
SPS	Safeguard Policy Statements
SS	Suspended Solids
ST	Scheduled Tribes
UDD	Urban Development Department
UEAP	Uttarakhand Emergency Assistance Project

UEPPCB	Uttarakhand Environmental Protection and Pollution Control Board
UJS	Uttarakhand Jal Sansthan
UPJN	Uttarakhand Peyal Jal Nigam
U.P	Uttar Pradesh
UPCL	Uttarakhand Power Corporation Limited

## I. INTRODUCTION

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### A. Background

1. In the month of June 2013 a severe flood and rain event occurred in Uttarakhand causing extensive damage to the state. The major affected areas are of Roads and bridges, Water Supply other infrastructure and livelihood. To assist in the rehabilitation works ADB decided to assist the Government of Uttarakhand in rehabilitating the various sectors. As part of this, ADB has provided a loan (No. 3055-IND) to the government of India. For smooth functioning of the various works **Uttarakhand Emergency Assistance Project (UEAP)** is devised. The UEAP will support the Government of India (GoI) and the Government of Uttarakhand (GoU) in their efforts to rehabilitate and reconstruct the damaged water supply system in 9 selected towns of Uttarakhand. The investment program will support: (i) Water supply; and (ii) Planning and design, institutional and policy development, capacity building and creating awareness.
2. The Project Management Unit (PMU) of Uttarakhand Emergency Assistance Project (UEAP) created for implementation of the said project under the Government of Uttarakhand (GoU) and the Project Implementation Units (PIU), Uttarakhand Jal Sansthan (UJS) will be provided with necessary consulting services under the proposed loan to strengthen their project design, management and implementation capabilities including mainly engineering design and construction supervision. The work in this Project is of emergency nature and has to be finished within stipulated time, so as to provide drinking water to affected population. The Executing Agency (EA), State Disaster Management Authority (SDMA) will work closely with the Implementing Agency (IA) Uttarakhand Jal Sansthan
3. Total 09 towns, 06 towns of Garhwal Region and 03 towns of Kumaun Region have been selected for implementation of water supply sub project of Assistance Project. Towns selected for implementation of water supply sub project in Garhwal regions are - Srinagar, Devprayag Rudraprayag , Gauchar , Karnprayag and Uttarkashi . Towns selected for implementation of same subproject in Kumaun regions are - Dharchula, Kapkot and Bageshwar . Location of the project towns are shown in **Figure 1**



**Figure 1: Location of project towns in Uttarakhand**

4. To support implementation of the Program, UEAP have engaged STUP Consultants Pvt. Ltd. as Design & Supervision Consultant (DSC). Design and Supervision Consultant (DSC) firm assists Investment Project Management Unit (IPMU) and the respective Investment Project Implementation Units (IPIUs) to undertake necessary surveys and investigations, detailed engineering designs, quantity and cost estimation, preparation of bid documents, procurement activities, preparation of construction drawings, construction supervision including recording measurements, quality control, assisting community awareness and poverty alleviation program associated with the Project.
5. Three contractors – M/s Kashmirilal Construction P. Ltd and M/s R.K. Engineers Sales Ltd and M/S Uttaranchal Tube well Construction have been appointed to implement the subprojects. As per contract, M/s Kashmirilal Construction P. Ltd will implement the subproject in Kapkot, Bageshwar, Dharchula and Devprayag town and M/s R.K. Engineers Sales Ltd will implement the subproject in Rudrapur, Karnprayag, Gauchar, Uttarkashi and Srinagar town. M/S Uttaranchal Tubewell Construction will implement construction of 6 tube wells at the bank of Alaknanda in Srinagar town.

## **B. Project Profile**

6. Up to 31<sup>st</sup> December, 2016, contract agreements were signed for all lots under 4 sub projects. Contractors have mobilized and working in all the project towns. Up to 31<sup>st</sup> December, 2016 contractors have done good progress in all subprojects and in some area considerable progress have been reported.
7. Scope of work for each subproject are as follows –

**Contract Package No. - UK/UEAP-UJS/WSS-KU/01/2014-15**

Sn.	Name of Town	Works Proposed
1	Kapkot	<ul style="list-style-type: none"> <li>Supply, Laying, Jointing, Testing &amp; Commissioning of 125 mm dia. MSERW lined Rising Main.</li> <li>Design, Supply, Erection of structural steel works for Bridge crossing.</li> <li>Design, Supply, Installation, Testing, Commissioning of Electro-chlorinator.</li> <li>Design, Supply, Installation, Testing, Commissioning of Electromagnetic flow meter.</li> <li>Design, Supply, Installation, Testing, Commissioning of Electromechanical works including Trial Run for a period of 3 months.</li> <li>Design, Supply, Installation, Testing, Commissioning of SCADA/Instrumentation works.</li> <li>Design, Construction, Testing, Commissioning, Trial Run for a period of 3 months of 1.4 MLD Infiltration Well at river Saryu including dewatering and diversion of water.</li> <li>Providing and Construction of Pump House over Infiltration Well or as required suitable for Pump House.</li> </ul>
2	Bageshwar	<ul style="list-style-type: none"> <li>Supply, Laying, Jointing, Testing &amp; Commissioning of 150mm dia. MSERW lined Rising Main including dismantling of existing 80 mm dia. GI Rising Main and hand over to Jal Sansthan at their store.</li> <li>Demolition of existing Raw and Clear Water pumping set including all electrical equipments, cable etc. at Kathayat Bada.</li> <li>Design, Supply, Installation, Testing, Commissioning of Electromechanical works including Trial Run for a period of 3 months at different locations.</li> <li>Instrumentation work at :               <ul style="list-style-type: none"> <li>(i) Proposed Infiltration Well Jalkal</li> <li>(ii) WTP at Thakurdwara</li> <li>(iii) WTP at Kathayatbada.</li> </ul> </li> <li>Design, Construction, Testing, Commissioning, Trial Run for a period of 3 months of 1.34 MLD Infiltration Well including diversion and dewatering of water at Jalkal Water Works.</li> <li>Provide &amp; Construction of Pump House over Infiltration Well or as required suitable for Pump House.</li> <li>Rehabilitation of WTP at Thakurdwara including Reconstruction of Alum Godown.</li> <li>Demolition of old intake structure/electrical/mechanical items at Jal Sansthan Water Works and old damaged Alum Godown and disposal of unserviceable material.</li> </ul>
3	Dharchula	<ul style="list-style-type: none"> <li>Supply, Laying, Jointing, Testing &amp; Commissioning of Distribution &amp; Gravity Mains including Valves &amp; Valve Chambers.</li> <li>Demolition of Stone Masonry CWR &amp; Steel CWR.</li> <li>Construction of Uttaranchal Koop.</li> <li>Construction of Intake Chamber/source work.</li> <li>Design, Construction, Testing, Commissioning &amp; Trial Run for a period of 3 months of 1.728 MLD Horizontal Flow Roughing Filter.</li> <li>Design, construction, testing, commissioning of RCC CWRs.</li> </ul>

**Contract Package No. - UK/UEAP-UJS/WSS-GW/01**

Sn.	Name of Town	Works Proposed
1	Rudraprayag	<ul style="list-style-type: none"> <li>Supply, Laying, Jointing, Testing &amp; Commissioning of MSERW lined Gravity Transmission Main.</li> <li>Supply, Installation of 3 No. Uttaranchal Koops.</li> <li>Rehabilitation of RCC Intake Chambers.</li> <li>Construction of RCC Bridge to carry the pipeline across the stream.</li> <li>Replacement / Supply &amp; Laying of pipelines damaged due to flood.</li> <li>Construction of Office Building.</li> <li>Supply and Installation of Sluice Valves, Scour Valves and Air Valves.</li> <li>Providing, Fixing of RCC Valve Chamber for housing valves.</li> <li>Supply and Installation of Bulk Water Meters.</li> <li>Road Restoration works.</li> </ul>
2	Karanprayag	<ul style="list-style-type: none"> <li>Supply, Installation of 1 No. of Infiltration Well.</li> <li>Rehabilitation of RCC Intake Chambers.</li> </ul>

		<ul style="list-style-type: none"> <li>Supply, Laying, Jointing, Testing and Commissioning of MS ERW pipe of 200mm (ID) dia, 6mm thick for a length of 6000m from Well Site (0 chainage) to ITI Colony Proposed Tank (6000 chainage).</li> <li>Construction of RCC Bridge to carry the pipeline across the stream at different locations.</li> <li>Construction of CWR of 500KL capacity at Pujari Gaon location, 150 KL at GGIC and 35KL CWR at taxi stand (Near Petrol Pump).</li> <li>Replacement / Supply &amp; Laying of pipelines damaged due to flood.</li> <li>Construction of Office Building.</li> <li>Supply and Installation of Sluice Valves, Scour Valves and Air Valves.</li> <li>Providing, Fixing of RCC Valve Chamber for housing valves.</li> <li>Supply and Installation of Bulk Water Meters.</li> <li>Road Restoration works.</li> <li>Design, Supply, Installation, Testing, and Commissioning of Electromechanical works including trial run for a period of 3 months at different locations.</li> <li>Instrumentation work at Proposed Infiltration Well.</li> </ul>
3	Gauchar	<ul style="list-style-type: none"> <li>Supply, Installation of 1 No. of Infiltration Well.</li> <li>Rehabilitation of RCC Intake Chambers.</li> <li>Supply, Laying, Jointing, Testing and Commissioning of MS ERW pipe of 200mm dia, 6mm thick for a length of 3000m from Airport gate (0 chainage) to Main Bazaar (1500 chainage) on both side of Main Bazaar road.</li> <li>Replacement / Supply &amp; Laying of pipelines damaged due to flood.</li> <li>Construction of Office Building as the existing office building was partly damaged.</li> <li>Supply and Installation of Sluice Valves, Scour Valves and Air Valves.</li> <li>Providing, fixing of RCC Valve Chamber for housing valves.</li> <li>Supply and Installation of Bulk Water Meters.</li> <li>Road Restoration works.</li> </ul>
4	Uttarkashi	<ul style="list-style-type: none"> <li>Construction of RCC Cross Wall for a length of 20 meters and height of 1 Meter.</li> <li>Construction of Intake Chamber of size 1.0 M X 1.0 M X 1.0 M.</li> <li>Supply and Laying of 250mm dia MS ERW Pipeline for a length of 150 Meters from the outlet of intake chamber of Kohari Gad source.</li> <li>Supply and Laying of 200mm dia MS ERW Pipeline for a length of 1000 Meters for replacing existing damaged 200mm dia CI pipeline feeding to Gufiyara WTP.</li> <li>Supply and Laying of 250mm dia MS ERW Pipeline for a length of 650 Meters downstream of WTP at Jangara.</li> <li>Supply and Laying of 200mm dia MS ERW Pipeline for a length of 50 Meters downstream of Chiwa Gad Stream Junction.</li> <li>Supply and Laying of 200mm dia MS ERW Pipeline for a length of 130 Meters below the bed across Assi Ganga River before confluence point (Sangam) of rivers Assi Ganga and Bhagirathi including concrete encasing for pipeline.</li> <li>Supply and Laying of 100mm dia GI Pipeline for a length of 1500 Meters from Gufiyara WTP CWR to Tiloth and 500 Meters form Gufiyara CWR to Batwadi WTP CWR.</li> <li>Supply and Laying of 125mm dia MS ERW Pipeline for a length of 800 meters and 100mm dia GI Pipeline for a length of 1200 Meters from Gufiyara WTP CWR to Gyansu.</li> <li>Sluice Valves, Scour Valves and Air Valves are proposed to be installed.</li> <li>RCC Valve Chambers and Thrust Blocks / Anchor Blocks are proposed to be constructed.</li> <li>Drilling of new Tube wells (2 nos.) through Dual Rotary Method of 400mm dia for a depth of 45 meter including providing and fixing ERW MS casing pipe for a depth of 20 meter.</li> <li>Construction of 2 Nos. RCC Framed Pump Houses of 20 Sqm area each at Ramleela Maidan.</li> <li>Rising main of ERW MS 300mm dia pipeline for a length of 1300 meter form Ramleela Maidan to 350 KL CWR at Gufiyara WTP.</li> <li>Supply and Fixing DI Non-return Valve, CI Bulk Water Meter, DI Sluice Valve at outlet pipeline from Tube Well inside each Pump House at Ramleela Maidan.</li> <li>Supply and Fixing DI Scour Valve for 300mm dia Rising Main near Ramleela Maidan.</li> <li>Supply and fixing DI Double Orifice Air Valve on 300mm dia Rising Main.</li> <li>Construction of RCC Valve Chambers for Scour Valve and Air Valves.</li> <li>Rehabilitation of 0.67 MLD WTP at Batwadi Road.</li> <li>Rehabilitation of 1.63 MLD WTP at Gufiyara.</li> </ul>

		<ul style="list-style-type: none"> <li>Rehabilitation of 4.58 MLD WTP at Jangara.</li> <li>Electrical Works.</li> </ul>
5	Devprayag	<ul style="list-style-type: none"> <li>Construction of RCC Cross Walls at Sources.</li> <li>Providing and Fixing Uttaranchal Koop.</li> <li>Supply and Laying of Transmission Mains.</li> <li>Construction of 50 KL and 100 KL CWRs.</li> <li>Supply and Laying of Distribution Pipelines.</li> <li>Supply and Installation of Valves and Water Meters.</li> <li>Construction of RCC Valve Chambers.</li> <li>Restoration of Roads.</li> <li>Construction of Office Building, Guest House Building, Staff Quarters Building.</li> </ul>

### Contract Package No. - UK/UEAP-UJS/WSS-GW/02/SRINAGAR (PAURI)

Name of Town	Works Proposed
Srinagar	<ul style="list-style-type: none"> <li>Construction of RCC Retaining Wall for Pump House.</li> <li>Design and Construction of RCC Framed Low Level Pump House.</li> <li>Providing and Fixing trolley / lifting arrangement for Low Level Pump House.</li> <li>Replacement of damaged raw water Pumps and Motors.</li> <li>Alteration of Existing Jack Well as High Level Pump House.</li> <li>Supply and Installation of New Raw Water Pumps in High Level Pump House (Existing Jack Well).</li> <li>Supply and Laying Raw Water Transmission Mains.</li> <li>Rehabilitation of 6 MLD Water Treatment Plant.</li> <li>Rehabilitation of 3.75 MLD Water Treatment Plant.</li> <li>Rehabilitation of 2.0 MLD Water Treatment Plant.</li> <li>Design and Construction of RCC Framed structure for Chlorine Room at existing WTP premises.</li> <li>Design, Supply and Installation of Chlorination System by Chlorine gas with Vacuum type Chlorinators for all three WTP's</li> <li>Supply and Installation of Clear Water Pumps in 6 MLD &amp; 3.75 MLD WTP Clear Water Pump Houses.</li> <li>Supply and Installation of Submersible Pumps for Infiltration Well.</li> <li>Supply and Laying Clear Water Transmission Main from Proposed Pump House.</li> <li>Supply and Installation of Clear Water Pumps at Tube Well site.</li> <li>Infiltration Well Site Protection Work by constructing RCC Gravity Retaining Wall.</li> <li>Supply and Laying Clear Water Transmission Mains from existing WTP to various reservoirs.</li> <li>Supply and Laying of Distribution pipelines with Pipe Appurtenances.</li> <li>Providing and Fixing House Service Connections.</li> <li>Road Restoration Works.</li> <li>Design and Construction of 500KL RCC Sump and Clear Water Pump House at Infiltration Well site.</li> <li>Design and Construction of Tube Well near Govt. ITI College.</li> <li>Water Supply Rehabilitation and Augmentation Scheme – Srinagar and Pauri</li> <li>Design and Construction of Pump house over Infiltration Well.</li> <li>Design and Construction of New Clear Water Storage Reservoirs of 500KL &amp; 1000KL Capacities.</li> <li>Design and Construction of Office Cum Staff Quarters building at existing WTP premises.</li> <li>Design, Supply, Installation, Testing, Commissioning of Electromechanical works including Trial Run for a period of 3 months.</li> <li>Design, Supply, Installation, Testing, Commissioning of Instrumentation, Automation and SCADA works at WTP premises and proposed tube Well site including Trial Run for a period of 3 months.</li> </ul>

### Contract Package No. - UK/UEAP-UJS/WSS-GW/02-01/SRINAGAR

Name of Town	Works Proposed
Srinagar	<ul style="list-style-type: none"> <li>Design and Construction of Tube Wells by drilling of bore hole using Direct Rotary Method/RR/Dual Rotary/Percussion method , lowering of well assembly, development of bore well, performance (yield) test, design, supply and installation of Mechanical equipment to suit yield test results</li> </ul>

	(single stage pumping), testing, commissioning, laying of required lengths of pipe line up to termination / destination points, as per site requirements, along with related mechanical as required, including Civil Works i.e Construction of Pump houses, chamber, Construction of Boundary Walls, operation and maintenance of tube wells for a period of 1 year and allied works in Srinagar..
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## C. Project & Report Purpose

8. Water Supply sub projects which are under implementation has been classified by ADB as environmental assessment Category B (some negative impacts but less significant than category A) and the impacts of sub - projects were assessed through Initial Environmental Examination (IEE), prepared according to ADB Safeguard Policy statement (SPS 2009).
9. This “Environment Monitoring Report” for the period July to December 2016 describes the status of implementation of the mitigation measures and monitoring recommended in the IEE for these sub – projects within the stated period.

## II. IMPLEMENTATION PROGRESS

### A. Major works and progress

10. Till date (31<sup>st</sup> December 2016) contractors have done good progress in all subprojects, some projects considerable progress has been reported. Monitoring and reporting on Environmental safeguard has been carried out for all the subprojects.
11. List of sub projects and their status is given hereunder:

**Table 1: Status of Sub Project status under UEAP- WSS (up to 31<sup>st</sup> December, 2016)**

Town	Package Code	Sub Project	Physical Progress
Kapkot	UK/UEAP-WSS-KU/01 Lot 1: Kapkot Lot 2 : Bageshwar Lot 3: Dharchula	1) Construction of Infiltration well 1.40mld -1 Nos 2) Laying of rising mains.7641 m 3) Electrical and Instrumentation works- 4 nos VT Pumps over I Well	1) Construction of Infiltration well – Completed. 2) Laying welding & hydraulic testing of rising mains 7641m complete. 3) HT panel & 4nos VT pumps under trail run.
Bageshwar		1) Construction of infiltration well1.34 mld -1 Nos 2) Pump house over Infiltration well-1 Nos 3) Alum Godown – I Nos 4) Rising mains-1074m 5) Pumps and related electrical and 6) Mechanical works- Pumps 6 Nos 7) Electrical and Instrumentation works	1) Work completed, trial run started on 01/11/2016 for Infiltration wall. 2) Rising mains-1176m Laid and 1176m hydraulic testing done. 3) Painting work is in progress at Alum Godown. 4) Pumps 4 nos – 4nos Pumps commissioned at Kathyathbada. 5) Electric panel installation and electric fitting completed at Infiltration wall.
Dharchula		1) Installation of Uttaranchal Koops 2) Construction of Horizontal flow Roughing filter 1.732mld-1 Nos 3) Construction of 25KL, 50KL and 300 KL Water tank 4) Gravity pipeline -8076m 5) RCC Intake Chamber	1) Uttaranchal Koop installation completed & supply under trial. 2) HFRF work completed & Supply started in old pipe line. New pipe line damage by PMGSY road construction. 3) Structural works for 25KL, 50KL tank and 300 KL Water tank Completed. Chlorinator installed. 4) Laying, jointing & hydraulic testing completed of Gravity pipeline -7958m. 5) RCC Intake Chamber- Intake chamber

Town	Package Code	Sub Project	Physical Progress
			& Uttaranchal Koop damage by PMGSY.
<b>Rudraprayag</b>	<b>UK/UEAP-WSS-GW/01</b> <b>Lot 1: Rudraprayag</b> <b>Lot 2 : Karnprayag</b> <b>Lot 3: Gauchar</b> <b>Lot 4: Uttarkashi</b> <b>Lot 5: Devprayag</b>	1) Installation of Uttaranchal Koop 2) Pipe Line -5880m 3) Office Building – 1 Nos 4) Stream Crossing – 1 Nos	1) 3nos Uttaranchal Koop Installation completed. Supply under trial. 2) Laying, jointing & hydraulic testing completed- 5880m. 3) Office building- Main office building, EE room, AE room, JE room & Store room completed 4) Stream Crossing- completed.
<b>Karnprayag</b>		1) Office Building 2) Pipe line work -14000m 3) 500 KL,150KL and 35 KL Water Tank and 100KL Sump 4) Infiltration Well 2.46 mld-1 Nos 5) Electromechanical works	1) Office Building –Completed. 2) Pipe line work -13575m Laid. 4021m hydro testing done. 3) Infiltration Well–Civil work completed. Boundary wall & finishing work is in progress. 4) Boundary wall is in progress at 500KL GLSR site. 5) 500 KL, 150KL, 35 KL GLSR completed. 6) 100KL SUMP and Pump house completed. Pump foundation work, Panel room & Boundary wall work in progress. 7) DG set & SCADA panel reached at site.
<b>Gauchar</b>		1) Office Building- 1 Nos 2) 100 KL Water Tank and 100 KI Sump 3) Pipe Line Work-11000m 4) Infiltration Well 2.53 mld- 1 Nos 5) Electro Mechanical Works	1) Office Building- Completed. 2) 100KL GLSR work completed. 3) 100KL SUMP and Pump house completed. Pump foundation work, Panel room & Boundary wall work in progress. 4) Laying, jointing & hydraulic testing completed of Gravity pipeline - 11120m. 5) Infiltration Well–Civil work completed. Boundary wall & finishing work is in progress. 6) DG set & SCADA panel reached at site.
<b>Uttarkashi</b>		1) Construction of Tube well 5.76mld– 2 Nos 2) Pipe Line -7680m 3) Electrical and Instrumentation works 4) Repairs in Water treatment plant 5) Construction of Pump house	1) Construction of Tube well – 2 Nos completed 2) Laying, jointing & hydraulic testing completed of Gravity pipeline -5967m. 3) Electrical and Instrumentation works – Transformer & Control panel installed. 4) Water Treatment Plant – Filter media & PVC tube settler work completed at Bhattwadi WTP. Filter media, PVC tube settler work and painting work is in progress at Gufiyara WTP. 5) Construction of Pump house - Completed. 6) Electrical connection works completed for pump house.
<b>Devprayag</b>		1) Installation of Uttaranchal Koop 3nos. 2) Pipe Line Works- 31000m. 3) 50 KL Water Tank. 4) Office Building- 1 Nos	1) Installation of 3 nos Uttaranchal Koop completed. 2) Pipe Line Work-30900m Laid and 10689m hydraulic testing done. 3) 50KI GLSR completed. Valve fixing & chamber work completed. 4) Office building- Plaster & Electric fitting work in progress.
<b>Srinagar</b>	<b>UK/UEAP-WSS-GW/02</b>	1) Construction of pump house 2) Installation of raw water and clear water. Pumping machinery.-28 No Pumps 3) Pipeline Works-31837m 4) Rehabilitation of water	1) Pump house painting work is in progress. 2) Installation of raw water and clear water pumping machinery-24 nos Pumps reached at site. 22 pumps installed at Srinagar. 3.75mld CWP 6

Town	Package Code	Sub Project	Physical Progress
		treatment Plants. 5) Electrical and Instrumentation works. 6) Office Building- 1 Nos 7) 1000KL, 500KL Water Tank and 500KL Sump. 8) SCADA Room	commissioned. 6 mld CWP-8 pumps installed & flooring work in progress. RWP-5 pumps installed and 4 pumps commissioned, 1 commissioned at Pauri. 3) Pipeline Works-32981m laid and 19598m hydraulic testing done. 4) Electrical and Instrumentation works- DG set & electric panel reached at site. 5) Office Building-Completed. 6) 1000KL Tank-Completed. 7) 200 KL GLSR –Finishing work is in progress. 8) 500KL SUMP- Hydro testing work successfully done. SCADA room- Completed.
Srinagar	UK/UEAP-WSS-GW/02-01	Construction of Tube Wells 8.64 mld– 6 Nos	1) All 06 nos tubewells monitoring done. 2) All 06 nos tubewells development completed 3) Boundary wall work is in progress.

12. Table 2 show the status of the sub project implementation, starting date, schedule date of completion and physical progress.

**Table 2: Status of Sub-project Implementation under UEAP- WSS (Up to 31st December, 2016)**

Location	Component, name of the sub project (Code No.)	Starting date of Implementation	Projected months of completion (as per Work order)	Schedule date of completion & Extended date of completion	Physical progress (%) as on 31.12.16
Kapkot	Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc. at Kapkot, Bageshwar & Dharchula (UK/UEAP-WSS-KU/01)	01.11.2014	18 months	31.05.2016 18.12.2016 31.01.2017	100
Bageshwar		01.12.2014	18 months	31.05.2016 18.12.2016 31.03.2017	97.5
Dharchula		01.12.2014	18 months	31.05.2016 30.11.2016 31.03.2017	100
Rudraprayag	Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc. at Rudraprayag, Karnprayag, Gauchar, Uttarkashi & Devprayag (UK/UEAP-WSS-GW/01)	19.01.2015	18 months	18.07.2016 30.11.2016 31.01.2017	100
Karnprayag		19.01.2015	18 months	18.07.2016 18.12.2016 31.03.2017	89.6
Gauchar		19.01.2015	18 months	18.07.2016  18.12.2016 31.03.2017	91.3
Uttarkashi		19.01.2015	18 months	18.07.2016  30.11.2016 31.03.2017	92.5

Location	Component, name of the sub project (Code No.)	Starting date of Implemen- tation	Projected months of completion (as per Work order)	Schedule date of completion & Extended date of completion	Physical progress (%) as on 31.12.16
Devprayag		09.03.2015	18 months	08.09.2016 18.12.2016 31.03.2017	86.7
Srinagar	Construction of low level pump house, installation of raw water and clear water pumping machinery, Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains, Rehabilitation of WTP's Design, Supply, Construction and Commissioning of Infiltration Wells, Construction of Sump and Electrical and Instrumentation works at Srinagar (UK/UEAP-WSS-GW/02)	19.01.2015	18 months	18.07.2016 18.12.2016 31.03.2017	85.8
Srinagar	Design and Construction of Tube Wells by drilling of bore hole using Direct Rotary Method/RR/Dual Rotary/Percussion method , lowering of well assembly, development of bore well, performance (yield) test, design, supply and installation of Mechanical equipment to suit yield test results (single stage pumping), testing, commissioning, laying of required lengths of pipe line up to termination / destination points, as per site requirements, along with related mechanical as required, including Civil Works i.e Construction of Pump houses, chamber, Construction of Boundary Walls, operation and maintenance of tube wells for a period of 1 year and allied works in Srinagar UK/UEAP-WSS-GW/02 -01)	19.04.2016	06 months	18.10.2016 31.03.2017	83.3

## B. Compliance of Safeguard Loan Covenants

13. The status of compliance of ADB's major Loan Covenants related to Safeguard issues is shown below:

Serial no. as per loan agreement	Program Specific Covenants	Status / Issues
<b>Environment</b>		
9	The Borrower shall ensure or cause the EA and IAs to ensure that the preparation, design, construction, implementation, operation and decommissioning of the Project facilities comply with (i) all applicable laws and regulations of the Borrower and State relating to environment, health, and safety; (ii) the Environmental Safeguards of ADB; and (iii) all measures and requirements set forth in the EARF, EIA/ IEE as applicable, and the EMMP, and any corrective or preventative actions set forth in a Safeguards Monitoring Report.	<p><b>Under compliance</b></p> <p>Documents have been prepared by complying all relevant State and National Laws, Safeguard Policy Statement (SPS 2009) of ADB, Environment Assessment Review Framework (EARF).</p> <p>Initial Environmental Examination (IEE), Environment Management Plan (EMP) report prepared and approved by ADB. Due to change of scope during implementation IEEs have been revised and submitted to ADB.</p> <p>All measures and requirements as prescribed in IEE and EMP has been considered during implementation.</p> <p>Corrective or preventive action plans which reflected in Environment Monitoring Report has been taken care by project implementation authority</p>
<b>Human and Financial Resources to Implement Safeguards Requirements</b>		
12	The Borrower shall ensure or cause the EA and relevant IA to ensure (a) that all necessary budgetary and human resources to fully implement the EMMP as required, are made available; and (b) designates at least one official each to supervise implementation of the EMMP	<p><b>Under compliance</b></p> <p>Budgetary provisions have been included in EMPs One officer designated to supervise implementation of the EMMP</p>
<b>Safeguards – Related Provisions in Bidding Documents and Works Contracts</b>		
13	Borrower shall ensure or cause the EA and each IA to ensure that all bidding documents and contracts for Works contain provisions that require contractors to: (a) comply with the measures and requirements relevant to the contractor set forth in the EIA/IEE, the EMMP, the RPs and any IPP (to the extent they concern impacts on affected people during construction), and any corrective or preventative actions set out in a Safeguards Monitoring Report; (b) make available a budget for all such environmental and social measures; (c) provide the relevant IA with a written notice of any unanticipated environmental, resettlement or indigenous peoples risks if any, or impacts that arise during construction, implementation or operation of the project that were not considered in the EIA/IEE, the EMMP, and the RP or the IPP if any; (d) adequately record the condition of roads, agricultural land and other infrastructure prior to starting to transport materials and construction; and (e) fully reinstate pathways, other local infrastructure, and agricultural land to at	<p><b>Under compliance</b></p> <p>(a) Approved IEEs, EMPs and RPs are attached in Bidding documents.</p> <p>In case of any change of scope, revised IEEs, EMPs have been prepared and corrective measures disclosed to contractor and same reflected in the “Environment Monitoring Report”</p> <p>(b) All IEEs indicate budgetary provisions for implementation of EMPs</p> <p>(c) With the development of sub project and implementation, in case of additional impacts/risks due to change in scope/area, that will be reflected in the revised IEEs, EMPs and Environment Monitoring Report and accordingly project Executing Agency will inform the Construction Agency for taking relevant corrective measures.</p> <p>(d) Haul roads marked properly (by avoiding residences and agricultural land) before commencement of transportation of materials.</p> <p>(e) Pathways, land which are likely to be affected for a short period during implementation of the sub project have been restored by concerned construction agency before acceptance of the work. Restoration status will be reflected in post construction monitoring report</p>

Serial no. as per loan agreement	Program Specific Covenants	Status / Issues
	least their pre-project condition upon the completion of construction.	
<b>Safeguards Monitoring and Reporting</b>		
14	The Borrower shall ensure or cause the EA and each IA to ensure the following: (a) submit semi-annual Safeguards Monitoring Reports to ADB and disclose relevant information from such reports to affected persons promptly upon submission; (b) if any unanticipated environmental and/or social risks and impacts arise during construction, implementation or operation of the Project that were not considered in the IEE/EIA, the EMMP, the RPs or any IPP, promptly inform ADB of the occurrence of such risks or impacts, with detailed description of the event and proposed corrective action plan; and (c) report any breach of compliance with the measures and requirements set forth in the EMMP, the RPs or any IPP promptly after becoming aware of the breach.	<b>Under compliance</b> (a) This is 5 <sup>th</sup> Semi-annual Environment Monitoring Report, prepared for the period July to December 2016. Next semi-annual report is due on 30 <sup>th</sup> June 2017. (b) With the development of project and implementation, in case of additional impacts/risks due to change in scope/area, will be reflected in revised IEEs, EMPs and accordingly Executing Agency (EA) will inform the ADB along with corrective action plan which will be reflected in the Monitoring Report. Accordingly revised IEEs were submitted to ADB and approved by ADB (c) In case of any breach of compliance with the measures and requirements set forth in the EMP; EA will promptly inform ADB and suitable corrective action plan will be planned.
<b>Prohibited List of Investments</b>		
15	The Borrower shall ensure or cause the EA and each IA to ensure that no proceeds of the Loan are used to finance any activity included in the list of prohibited investment activities provided in Appendix 5 of the SPS.	<b>Complied</b> For selection of sub projects there is no violation of prohibited investment activities as per ADB SPS (2009) Appendix 5.
<b>Labor Standards</b>		
16	The EA through each IA shall ensure that civil works contracts under the Project follow all applicable labor laws of the Borrower and State and that these further include provisions to the effect that contractors; (i) carry out HIV/AIDS awareness programs for labor and disseminate information at worksites on risks of sexually transmitted diseases and HIV/AIDS as part of health and safety measures for those employed during construction; and (ii) follow and implement all statutory provisions on labor (including not employing or using children as labor, equal pay for equal work), health, safety, welfare, sanitation, and working conditions. Such contracts will also include clauses for termination in case of any breach of the stated provisions by the contractors.	<b>Complied in document and to be complied during implementation</b> Provision are included (as per EMP & BID document) to carry out HIV/AIDS awareness programs for construction contractor, application of all relevant labour laws for health and safety including child labour law and engagement of local labours (preferably from economically backward group) covering women labours. In case of any breach of provision, necessary corrective measures as per contract clauses shall be taken. All activities including awareness program will be reflected in "Monitoring Report".

### C. Environmental and Social Organization and Management along with Implementation Arrangements

- The institutional arrangements specify the arrangements for the implementation of environmental provisions of the proposed sub-projects. The Executing Agency (EA), State Disaster Management Authority (SDMA) will work closely with the Implementing Agency (IA) Uttarakhand Jal Sansthan for effective implementation of environmental safeguards related requirements of the sub-projects. The institutional arrangements and responsibilities are detailed below.

15. The sub-projects will be implemented and monitored by Uttarakhand Jal Sansthan as Implementing agency and implemented through its Field PIU's supported by DSC (also working as Engineer) and overall management support shall be provided by PMU, UEAP.
16. The Safeguard Staff of UEAP SDMA (EA) in PMU & IA will monitor the implementation of environmental covenants with assistance of Engineer (DSC).
17. UEAP SDMA (EA) shall be responsible for ensuring compliance to environmental requirements of the ADB as well as central/state governments and reporting the same to ADB. A relevant portion of EMMP will be a part of contract with the civil works contractors engaged for execution of the works. The primary responsibility of implementation of EMMP is of the IA during pre-construction and operation and maintenance phases; and of the civil works contractor during the construction phase as defined in the EMMP. The responsibility of supervision of EMMP implementation is of the DSC; and it would guide the IA and the civil works contractors in this regard. DSC with IA and EA, UEAP will act as monitoring agency as delegated in EMMP. All applicable statutory environmental clearances, consents, and/or permits (at national, state and local levels) as required for the implementation of the subproject would be obtained by the IA or by the civil works contractor in line with India's national/state/local laws and regulations, and in accordance with ADB's SPS 2009 requirements. Redressal of grievances shall be the responsibility of UEAP SDMA (EA). Apart from the mechanism for the grievances receiving and redressal at the level of EA, the provision shall be kept in the EMP of the subprojects wherein the contractor will depute one Environmental Safeguard Officer who shall be responsible for implementation of EMP, reporting and grievance redressal on day-to-day basis. The grievances/complaints received at the level of contractor shall be recorded on the Complaints Register and the same shall be forwarded to the DSC (Engineer of the Contract) within 48 hours along with the details of action taken to redress the grievance. The Team Leader of DSC shall immediately try to resolve the issues and forward the details to the FPIU / IA. If the action taken by Contractor and DSC is found to be inadequate, then necessary instructions shall be issued by the FPIU/IA for implementation of rectification measures.

### III. ENVIRONMENTAL PROCEDURE REVIEW

#### A. Compliance with Environmental Regulations

18. Three sub projects are considered under UEAP – water supply system. As per state and national rules clearance and consent are required for few projects. Clearance status for subprojects is given in **Table 3** below.
19. Environmental compliance status for the running project is enclosed in **Annexure 1**.

**Table 3: Present Status of Environment, Forest & other clearances (up to December, 2016)**

Work (Package No.)	Applicable Legislation/ Type of clearance	Subject / Issue	Clearance given by and date	Remarks/ Action taken
Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells,	Water (Prevention and Control of Pollution) Act. 1974 Consent to Establish (CTE)/ Consent to Operate (CTO) for rehabilitation of	Consent to Establish (CTE)/ Consent to Operate (CTO) for rehabilitation of WTP	Not required	Existing Water Treatment Plant does not have Consent to Operate under Water (Prevention and Control of Pollution) Act, 1974 and amendments. Ref. to discussion with

Work (Package No.)	Applicable Legislation/ Type of clearance	Subject / Issue	Clearance given by and date	Remarks/ Action taken
WTP, GLSR etc. at Kapkot, Bageshwar & Dharchula <b>(UK/UEAP-WSS-KU/01)</b> <b>Lot 2: Bageshwar</b>	WTP from Uttarakhand Environmental Protection and Pollution Control Board (UEPPCB) at Dehradun.			Pollution Control Board it emerges that there is no fixed requirement for consent to establish/ Consent to Operate for rehabilitation of WTP.
Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc. at Rudraprayag, Karnprayag, Gauchar, Uttarkashi & Devaprayag <b>(UK/UEAP-WSS-GW/01)</b> <b>Lot 4: Uttarkashi</b> <b>Lot 5: Devprayag</b>	Water (Prevention and Control of Pollution) Act. 1974 Consent to Establish (CTE)/ Consent to Operate (CTO) for rehabilitation of WTP from Uttarakhand Environmental Protection and Pollution Control Board (UEPPCB) at Dehradun.	Consent to Establish (CTE)/ Consent to Operate (CTO) for rehabilitation of WTP	Not required	Existing Water Treatment Plant does not have Consent to Operate under Water (Prevention and Control of Pollution) Act, 1974 and amendments.  Ref. to discussion with Pollution Control Board it emerges that there is no fixed requirement for consent to establish/ consent to operate for rehabilitation of WTP.
	As per "The Forest (Conservation) Act, 1980" online application submitted to DFO for acquisition of forest land tree felling	Forest land acquisition – 0.36 ha for construction of office building at Devaprayag	Clearance obtained on 30.12.2015 by Government of India Ministry of Environment, forest and climate change, Regional office Dehradun	0.36 ha of forest land for non forest purpose handed over to UJS on 18.02.2016 on lease for 30 years and maintenance of 190 trees.
Construction of low level pump house, installation of raw water and clear water pumping machinery, Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains, Rehabilitation of WTP's Design, Supply, Construction and Commissioning of Infiltration Wells, Construction of Sump and Electrical and Instrumentation works at Srinagar <b>(UK/UEAP-WSS-GW/02)</b>	Water (Prevention and Control of Pollution) Act. 1974 Consent to Establish (CTE)/ Consent to Operate (CTO) for rehabilitation of WTP from Uttarakhand Environmental Protection and Pollution Control Board (UEPPCB) at Dehradun.	Consent to Establish (CTE)/ Consent to Operate (CTO) for rehabilitation of WTP	Not required	Existing Water Treatment Plant does not have Consent to Operate under Water (Prevention and Control of Pollution) Act, 1974 and amendments.  Ref. to discussion with Pollution Control Board it emerges that there is no fixed requirement for consent to establish/ Consent to Operate for rehabilitation of WTP.
For all packages under UEAP- WSS UK/UEAP-WSS-KU/01 UK/UEAP-WSS-GW/01 UK/UEAP-WSS-GW/02	Water (Prevention and Control of Pollution) Act. 1974 The Air (Prevention and Control of Pollution) Act, 1981, as amended by Amendment Act,	-	-	During implementation of project compliances against Air Act, Noise Rules and Water Act have been complied.  Silent generators will be installed.

Work (Package No.)	Applicable Legislation/ Type of clearance	Subject / Issue	Clearance given by and date	Remarks/ Action taken
Srinagar (UK/UEAP-WSS-GW/02-01)	1987 Noise Pollution (Regulation and Control) Rules, 2002 amended up to 2010  Also for setting up diesel generator Consent to Establish (CTE) and Consent to Operate (CTO)			

#### IV. IMPLEMENTATION STATUS OF ENVIRONMENT MEASURES

20. Work in all the 9 sub projects till 31<sup>st</sup> December, 2016 are under progress. In some sub project works are almost complete. Application of EMP is being implemented as per IEE report. The compliance monitoring format for application of mitigation measures against impacts on air, water, soil environment, and social and safety aspects is enclosed in **Annexure 2**. Format for summary compliance status of EMP application and actions/ corrective measures presented in **Table 4** below.

**Table 4: Summary Compliance status of Environment Management and Monitoring Plan (31.12.2016)**

Location	Name of Sub Project	EMP being Implemented (Yes / No)	Overall Status of EMP Implementation (Excellent/ Satisfactory/ Partially Satisfactory/ Below Satisfaction/ Poor/ Very Poor)	Actions Proposed or continued/ Additional Corrective Measures Required
<b>Kapkot</b>	Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc. at Kapkot, Bageshwar & Dharchula (UK/UEAP-WSS-KU/01 Lot 1)	Yes	Satisfactory	Labour licence & workmen compensation obtained ✓ PUC certificate submitted ✓ Complete use of PPE ✓ Labour in rented accommodation ✓ Environmental monitoring tests have been done during construction phase ✓ Arrangement of First aid box
<b>Bageshwar</b>	Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc. at Kapkot, Bageshwar & Dharchula (UK/UEAP-WSS-KU/01 Lot 2)	Yes	Satisfactory	Labour licence & workmen compensation obtained ✓ PUC certificate submitted ✓ Complete use of PPE ✓ Labour in rented accommodation ✓ Environmental monitoring tests have been done during construction phase

Location	Name of Sub Project	EMP being Implemented (Yes / No)	Overall Status of EMP Implementation (Excellent/ Satisfactory/ Partially Satisfactory/ Below Satisfaction/ Poor/ Very Poor)	Actions Proposed or continued/ Additional Corrective Measures Required
				✓ Arrangement of First aid box
<b>Dharchula</b>	Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc. at Kapkot, Bageshwar & Dharchula <b>(UK/UEAP-WSS-KU/01 Lot 3)</b>	Yes	Satisfactory	Labour licence & workmen compensation obtained ✓ PUC certificate submitted ✓ Complete use of PPE ✓ Labour in rented accommodation . Environmental monitoring tests have been done during construction phase ✓ Arrangement of First aid box
<b>Rudraprayag</b>	Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc. <b>(UK/UEAP-WSS-GW/01-Lot 1)</b>	Yes	Satisfactory	Labour licence & workmen compensation obtained ✓ PUC certificate submitted ✓ Complete use of PPE ✓ Labour in rented accommodation ✓ Environmental monitoring tests have been done during construction phase ✓ Arrangement of First aid box
<b>Karnprayag</b>	Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc. <b>(UK/UEAP-WSS-GW/01-Lot 2)</b>	Yes	Satisfactory	Labour licence & workmen compensation obtained ✓ PUC certificate submitted ✓ Complete use of PPE ✓ Labour in rented accommodation ✓ Environmental monitoring tests have been done during construction phase ✓ Arrangement of First aid box
<b>Gauchar</b>	Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc. <b>(UK/UEAP-WSS-GW/01-Lot 3)</b>	Yes	Satisfactory	Labour licence & workmen compensation obtained ✓ PUC certificate submitted ✓ Complete use of PPE ✓ Labour in rented accommodation ✓ Environmental monitoring tests have been done during construction phase ✓ Arrangement of First aid box

Location	Name of Sub Project	EMP being Implemented (Yes / No)	Overall Status of EMP Implementation (Excellent/ Satisfactory/ Partially Satisfactory/ Below Satisfaction/ Poor/ Very Poor)	Actions Proposed or continued/ Additional Corrective Measures Required
Uttarkashi	Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc. (UK/UEAP-WSS-GW/01-Lot 4)	Yes	Satisfactory	Labour licence & workmen compensation obtained ✓ PUC certificate submitted ✓ Complete use of PPE ✓ Labour in rented accommodation ✓ Environmental monitoring tests have been done during construction phase ✓ Arrangement of First aid box
Devprayag	Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc. (UK/UEAP-WSS-GW/01-Lot 5)	Yes	Satisfactory	Labour licence & workmen compensation obtained ✓ PUC certificate submitted ✓ Complete use of PPE ✓ Labour in rented accommodation ✓ Environmental monitoring tests have been done during construction phase ✓ Arrangement of First aid box
Srinagar	Construction of low level pump house, installation of raw water and clear water pumping machinery, Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains, Rehabilitation of WTP's Design, Supply, Construction and Commissioning of Infiltration Wells, Construction of Sump and Electrical and Instrumentation works (UK/UEAP-WSS-GW/02)	Yes	Satisfactory	Labour licence & workmen compensation obtained ✓ PUC certificate submitted ✓ Complete use of PPE ✓ Labour in rented accommodation ✓ Environmental monitoring tests have been done during construction phase ✓ Arrangement of First aid box
Srinagar	Design and Construction of Tube Wells by drilling of bore hole using Direct Rotary Method/RR/Dual Rotary/Percussion method , lowering of well assembly, development of bore well, performance (yield) test, design, supply and installation of Mechanical equipment to suit yield test results (single stage pumping), testing, commissioning, laying of	Yes	Satisfactory	Labour licence & workmen compensation obtained ✓ PUC certificate submitted ✓ Complete use of PPE ✓ Labour in rented accommodation ✓ Arrangement of First aid box

Location	Name of Sub Project	EMP being Implemented (Yes / No)	Overall Status of EMP Implementation (Excellent/ Satisfactory/ Partially Satisfactory/ Below Satisfaction/ Poor/ Very Poor)	Actions Proposed or continued/ Additional Corrective Measures Required
	required lengths of pipe line up to termination / destination points, as per site requirements, along with related mechanical as required, including Civil Works i.e Construction of Pump houses, chamber, Construction of Boundary Walls, operation and maintenance of tube wells for a period of 1 year and allied works in Srinagar (UK/UEAP-WSS-GW/02-01)			

## V. ENVIRONMENTAL MONITORING AND EVALUATION

21. For effective monitoring, selected environmental parameters have been identified as indicators which will be qualitatively and quantitatively measured and compared over a period of time in order to assess/ensure the compliance of EMP. The environmental performance indicators are physical, biological and social characteristics identified as most important in affecting the environment at critical locations all along the subproject locations. The parameters identified as performance indicators are:
  - Air, noise, water and soil quality
  - Compliance to EMP
  - Compliance to local/state/national environmental regulations
22. During implementation process, performance monitoring fact sheet is being prepared against each possible environmental impact and attached with the monitoring report. **Annexure 3** shows the Performance Fact Sheet for implementation of EMP.
23. Base line air, noise, water quality monitoring have been carried out at all working areas of 9 towns, as per scope of work. During the period of reporting, construction monitoring has been carried out at 2 project towns.

September 2016 in Bageshwar town (Air, Water, Noise and Soil)

December 2016 in Devprayag town (Air, Water, Noise and Soil)

- ✓ In both the cases during construction and before construction PM<sub>2.5</sub> and PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>2</sub> concentrations are within the standard.
- ✓ Concentration of CO is below the detectable limit
- ✓ “During construction” noise level during day and night is marginally increased in both the towns in compared to base line level at those locations
- ✓ Water quality parameters like pH, total hardness, total dissolved solid, chloride, coliform bacteria all are within the standard
- ✓ Fluoride is not detected in water sample and also iron is below the limit.
- ✓ Also residual free chlorine is not detected in water sample

- ✓ There is no significant change in water quality status during construction
- 24. Construction stage monitoring has been conducted in all 9 towns as per Environment Management and Monitoring Plan. Next environmental monitoring of Operation and Maintenance period will be conducted in May 2017 at Kapkot and Rudraprayag and in June, 2017 once the subproject is handed over in Bageshwar, Dharchula, Devprayag, Karnprayag, Gauchar, Uttarkashi and Srinagar.

#### **VI. MAJOR PROJECT ISSUES AND PROBLEMS ENVIRONMENTAL CONTEXT**

- 25. Field activity of the sub-project is almost over at most of the locations. Up to 31<sup>st</sup> December, 2016 contractors have done good progress in all subprojects and in some area considerable progress has been reported. Till date, no major issues and problems have been encountered at the sub project locations.

#### **VII. CONSULTATIONS AND RECOMMENDATIONS ENVIRONMENTAL CONTEXT**

- 26. For protection of local environment during construction phase, application of mitigation measures will be done as per specified EMP. Public consultation during construction/implementation phase particularly at sensitive areas was planned as per the requirement. To create awareness among workers and supervisors on Environment Health and safety issues during construction contractor and DSC arranged onsite training programmes for the contractor's workers along the construction supervisors.

#### **VIII. GRIEVANCE REDRESSAL**

- 27. A joint social and environmental redress mechanism has been implemented under the project. Grievances and suggestions related to inappropriate implementation of the project and components of EMP come-up from local and affected people. The expected range of grievances to be handled through this mechanism encompasses everything and is not limited to the following: i) nuisance from noise, dust, and temporary blocking of access; ii) contamination of receiving water from runoff; iii) emissions from increase vehicular traffic and stationary sources like construction machineries; iv) conflict between local residents and migrant workers; v) ownership of vegetation for clearing; and vi) damage compensation. These issues are addressed through acknowledgement, evaluation and corrective action and response approach. Grievances from public or stakeholders concerning the project and EMP implementation are received by the concerned Executive Engineer of UEAP division. The Executive Engineer shall refer the application to Design and Construction Supervision Consultants (DSC) who then assess the grievances/suggestions and if they are found to be genuine and acceptable, which are resolved at division level itself within 15 to 30 days from the date of receipt. In case, the issue is unable to be resolved, the matter is forwarded to the PMU, UEAP (Head quarter). This mechanism is non-judicial in nature and does not preclude the affected people coursing their grievances to the courts. The corrective action is started as per the action plan indicated to the stakeholder. The action taken and the outcome shall form a part of quarterly report to ADB.
- 28. Central GR committee has been set up under UEAP at UJS.
- 29. Sample Grievance Registration Format is enclosed as **Annexure 6 & 7**.

## IX. ISSUES AND ACTION PLAN

30. Urbanization has increased at a rapid pace in India over the recent years, much faster than the increase in urban infrastructure facilities to support them. Also, pressure of population has been more on larger towns/cities putting enormous pressure on the resources of municipalities so much so that most are unable to keep up with the provision of even basic services and infrastructure resulting in irregular availability of water, sanitation and public amenities. In extreme cases, this has aggravated risks to public health and safety. Nine towns as selected under the Emergency Program particularly for water supply sector needs immediate attention and urgent implementation process.
31. Experience from ADB-funded urban projects show complex social, economic, legal, institutional, and management issues in urban development – largely derived from realities of urban life in developing countries like India. Urban projects typically consist of a variety of infrastructure such as roads, water, sewerage, solid waste, and slum improvement/upgrading activities. It is important to mention in this context that the final detailed engineering design in each sub project of UEAP have been prepared keeping in mind to avoid or minimize social and environmental impact as far as possible.
32. Contractors have done good progress in all subprojects and in some areas considerable progress have been reported. Provisions in the EMP are implemented in all the subproject towns (**Refer Annexure -15**). Till date, no major issues and problems have been encountered with, at the sub project locations. Suggestion & action plan is shown in **Table 5**

**Table 5: Suggestion & Action plan considered for satisfactory Environmental Compliances**

Sr. No.	Issues	Suggestion and recommendation	Action to be taken by	Time Frame
1	Application of EMP	Continue on regular basis	Contractor in association with PIU and DSC	Continue process. Submission of monthly format
2	Health and Safety – complete use of PPE	Complete use of PPE	Contractor	Continue process.
3	Pollution Under control certificate	Collection of remaining PUC for vehicle and equipment	Contractor	Continue process.
4	Arrangement of labour camp/ rented house for contractor	Arrangement as per requirement	Contractor	Continue process
5	Restoration of the construction area	At earliest as possible	Contractor	Continue process.
6	Social relationship and public safety	Arrangement of safety tape and public consultation	Contractor	Continue process
7	Training to workers	Regular tool box training for laborers. Safeguard orientation training for contractor	Contractor, PIU, DSC	Continue process
8	Renewal of Labour License	Continue on regular basis	Contractor, PIU, DSC	Continue process

**ANNEXURE 1: ENVIRONMENT FOREST AND OTHER COMPLIANCES (as on 31<sup>st</sup> December, 2016)**

Package	EIA Clearance	Wet Land	Forest Clearance	Wild Life Act applicability	Tree Cutting Permission	Permission from State/ National Archaeological dept.	Consent for establishment of crusher from quarry material supplier	MSW Rules	CTE/ CTO	Authorization	Ground Water Permission	PUC	Date of Environmental Monitoring
(UK/UEAP-WSS-KU/ 01 Lot 1) Kapkot	NR	NR	NR	NR	NR	NR	NR	NA	NR	NA	NR	Submitted	Base line Jan, 2015  During construction June, 2015, Nov., 2015 and Jan., 2016
(UK/UEAP-WSS-KU/01 Lot 2) Bageshwar	NR	NR	NR	NR	NR	NR	NR	NA	NR	NA	NR	Submitted	Base line Jan, 2015  During construction Nov., 2015, Jan., 2016 and Sept., 2016
Supply (UK/UEAP-WSS-KU/01 Lot 3) Dharchula	NR	NR	NR	NR	NR	NR	NR	NA	NR	NA	NR	Submitted	Base line  Jan, 2015  During construction June, 2015, Nov., 2015 and Jan., 2016
(UK/UEAP-WSS-GW/01-Lot 2) Rudraprayag	NR	NR	NR	NR	NR	NR	NR	NA	NR	NA	NR	Submitted	Base line Feb., 2015 During construction Oct., 2015, April, 2016 and June, 2016
(UK/UEAP-WSS-GW/01-Lot 2) Karnprayag	NR	NR	NR	NR	NR	NR	NR	NA	NR	NA	NR	Submitted	Base line Feb., 2015 During construction Oct., 2015, April, 2016 and June, 2016
(UK/UEAP-WSS-GW/01-	NR	NR	NR	NR	NR	NR	NR	NA	NR	NA		Submitted	Base line

Package	EIA Clearance	Wet Land	Forest Clearance	Wild Life Act applicability	Tree Cutting Permission	Permission from State/ National Archaeological dept.	Consent for establishment of crusher from quarry material supplier	MSW Rules	CTE/ CTO	Authorization	Ground Water Permission	PUC	Date of Environmental Monitoring
Lot 3) Gauchar											NR		Jan., 2015 During construction Oct., 2015, April, 2016 and June, 2016
(UK/UEAP-WSS-GW/01-Lot 4) Uttarkashi	NR	NR	NR	NR	NR	NR	NR	NA	NR	NA	NR	Submitted	Base line Feb., 2015 During construction Oct., 2015, April, 2016 and June, 2016
(UK/UEAP-WSS-GW/01-Lot 5) Devprayag	NR	NR	Yes – forest clearance received on 18.02.2016	NR	Yes – forest clearance received on 18.02.2016	NR	NR now	NA	NR	NA	NR	Submitted	Base line April, 2015 During construction Dec., 2015, May, 2016 and Dec., 2016
(UK/UEAP-WSS-GW/02) Srinagar	NR	NR	NR	NR	NR	NR	NR now	NA	NR	NA	NR	Submitted	Base line Feb., 2015 During construction Oct., 2015, April, 2016 and June, 2016
(UK/UEAP-WSS-GW/02-01) Srinagar (tube wells)	NR	NR	NR	NR	NR	NR	NR now	NA	NR	NA	NR	Submitted	Base line Feb., 2015 During construction Oct., 2015, April, 2016 and June, 2016

## ANNEXURE – 2: COMPLIANCE OF APPLICATION OF EMMP

Project: Water Supply - Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc. at Kapkot, Bageshwar & Dharchula								
Package No: UK/UEAP-WSS-KU/01 Lot 1, Lot 2, Lot 3								
Sr. No.	Field /Issue	Mitigation Activities and Method	Parameters monitored	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
<b>Site Establishment and Preliminary Activities phase</b>								
1	Legislation, Permits and Agreements	In all instances, EA, IA contractors and consultants must remain in compliance with relevant environmental legislation of India at the national, state and local levels. Proof of compliance to statutory requirements must be forwarded by the facility owner and/or contractor to PMU/PIU in relation to hot mixing, stone crushers, diesel generators etc. A copy of the EMP must be kept on site during the construction period	EMP implementation at site  NOC from competent authority	All project sites	DSC/PIU	Observation and document checking	Environment Specialist of DSC and Environment Officer of PMU	NOC not required  EMP available with PIU and being implemented
2	Education of site staff on general and Environmental Conduct	Ensure that all site personnel have a basic level of environmental awareness training Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task No operator shall be permitted to operate critical items of mechanical equipment without having been trained by the Contractor.	Documentation – Training and awareness	All project sites	DSC/PIU and contractor	Materials and records on awareness training program	Environment Specialist of DSC and Environment Officer of PMU and contractor	Complied Site Safety training arranged by Environment Specialist of DSC and contractor Environment Officer
3	Social Impacts	Open liaison channels shall be established between the Site owner, operator, the contractors and interested and affected parties	Sign boards  Project information	All project sites	DSC/PIU	Site visit and public consultations	Environment Specialist of DSC and Environment	Complied during construction

<b>Project: Water Supply - Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc. at Kapkot, Bageshwar &amp; Dharchula</b> <b>Package No: UK/UEAP-WSS-KU/01 Lot 1, Lot 2, Lot 3</b>								
Sr. No.	Field /Issue	Mitigation Activities and Method	Parameters monitored	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
		such that any queries, complaints or suggestions pertaining to environmental management aspects can be dealt with quickly and by the appropriate person(s). Provide sign boards for pedestrians to inform nature and duration of construction works and contact numbers for concerns/complaints.	dissemination				Officer of PMU	
4	Lack of sufficient planning to assure long term sustainability of the improvements and ensure protection of the assets created and the architectural/archaeological character of the surroundings	Design will include provisions for ensuring effective maintenance and protection of the assets created so as to ensure the long term sustainability.	Maintenance procedure as per design	All project locations	PMU/PIU	Observation and document checking	Environment Specialist of DSC and Environment Officer of PMU	Complied in design
5	Layout of components and its location to avoid impacts on the aesthetics, sensitive environmental areas / attributes of the site	The project components siting will avoid impacts on the aesthetics of the site, ensure minimal impacts and in compliance with statutory and regulatory requirements.	Layout of components	All project locations	PMU/PIU/ DSC	Observation and document checking	Environment Specialist of DSC and Environment Officer of PMU	Complied in design and EMP

<b>Project: Water Supply - Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc. at Kapkot, Bageshwar &amp; Dharchula</b> <b>Package No: UK/UEAP-WSS-KU/01 Lot 1, Lot 2, Lot 3</b>								
Sr. No.	Field /Issue	Mitigation Activities and Method	Parameters monitored	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
6	Selection of materials and construction technologies, if not carefully chosen, will adversely impact the aesthetic appeal of the destinations	Selection of materials will be according to specification and from approved sources Procurement of all material according to the material specification of the contract document and sourced from licensed and approved sources.	<ul style="list-style-type: none"> <li>List of approved quarry sites and sources of materials</li> <li>Construction Contractor documentation</li> </ul>	Material source sites	Contractor, PIU, DSC	<ul style="list-style-type: none"> <li>Checking of records</li> <li>Visual inspection of sites</li> </ul>	PMU and DSC	Complied
7	Socio cultural resources- Ground disturbance can uncover and damage archaeological and historical remains`	There is not such location anticipated on the project site. In case of chance of finding such location, Consult Archaeological Survey of India (ASI) and/or concerned dept. of Uttarakhand Govt. as applicable to obtain an expert assessment of the archaeological potential of the site	Chance find protocol	All excavation sites	PIU, PMU	Site observation, document checking	Environment Specialist of DSC and Environment Officer of PMU	NA
8	Integration of energy efficiency and energy conservation programs in design of sub-project components	The detailed designs for the sub-project components shall ensure that environmental sustainability principles, including energy efficiency, resource recycling, waste minimization, rainwater harvesting etc.	Detailed design	All project locations	DSC, PMU	Document checking and site feasibility	PMU	Complied
9	Site clearance activities, including delineation of construction areas	Any removal of vegetation or tree felling shall be done after taking statutory permissions if required. All works shall be carried out such that the damage or disruption of flora other than those identified for cutting is minimum.	Necessary permission/ NOC	All project locations	DSC, PIU	Document checking	Environment Specialist of DSC and Environment Officer of PMU	Complied Restoration done

<b>Project: Water Supply - Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc. at Kapkot, Bageshwar &amp; Dharchula</b> <b>Package No: UK/UEAP-WSS-KU/01 Lot 1, Lot 2, Lot 3</b>								
Sr. No.	Field /Issue	Mitigation Activities and Method	Parameters monitored	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
		Only ground cover/shrubs that impinge directly on the permanent works or necessary temporary works shall be removed with prior approval from the Environmental Expert of DSC All areas used for temporary construction operations will be subject to complete restoration to their former condition with appropriate rehabilitation procedures as per the rehabilitation plan						
10	Blockage of access in residential area, commercial area and sensitive location like school, college, hospitals and court	Contractor will identify such location in the preconstruction stage and prepare plan approved by DSC to minimize inconvenience to the people.	Complain from sensitive receptors	Construction location	PMU/DSC	Observation and checking of design	Environment Specialist of DSC and Environment Officer of PMU	Complied
11	Slope protection near reservoir and intake well	Retaining wall will constructed near reservoir and intake well	Protection work	-	PMU/DSC	Observation and checking of design	Environment Specialist of DSC and Environment Officer of PMU	Complied in design and EMP
<b>Construction phase</b>								
12	Construction Camps - Location, Selection, Design and Layout	Siting of the construction camps, labour camp, and stockpiles shall be as per the guidelines of UEPPCB, ULB, village panchayat and any	Selected location for construction	Construction camp site	Contractor	Site observation	Environment Specialist of DSC and Environment	Workers are staying in rented buildings with all

<b>Project: Water Supply - Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc. at Kapkot, Bageshwar &amp; Dharchula</b> <b>Package No: UK/UEAP-WSS-KU/01 Lot 1, Lot 2, Lot 3</b>								
Sr. No.	Field /Issue	Mitigation Activities and Method	Parameters monitored	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
		other applicable guideline to the local site. The contractor will assess the impact of the construction camp and should be acceptable to the PIU/ IA/PMU. Construction camps will be located away from settlements and drainage from and through the camps will not endanger any domestic or public water supply. Construction camps including sanitation facilities must be adequately drained. Sewage management through septic tanks and solid waste management through local ULB system or other alternate measures.	work camps and stockpile area,				Officer of PMU	facilities
13	Drinking water availability	Sufficient supply of potable water to be provided and maintained as per the standards, requirements, test methods and sampling procedure according to IS:10500.	Availability of drinking water	Working and camp site	Contractor	Site observation	Environment Specialist of DSC and Environment Officer of PMU	Arranged in working sites and also in living place
14	Waste disposal	Pre-identified disposal location (identified by Contractor in compliance to relevant regulation and approved by DSC) shall be part of Comprehensive Waste Disposal Plan Solid Waste Management Plan. Contractor shall ensure that waste shall not be disposed off near the water course or agricultural land, Orchards and Natural	<ul style="list-style-type: none"> <li>Waste Management List</li> <li>Complaints from sensitive receptors</li> </ul>	Project Locations	Contractor	<ul style="list-style-type: none"> <li>Checking of records</li> <li>Visual inspection of sites</li> </ul>	Environment Specialist of DSC and Environment Officer of PMU	Excess earth Utilized in back filling

<b>Project: Water Supply - Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc. at Kapkot, Bageshwar &amp; Dharchula</b> <b>Package No: UK/UEAP-WSS-KU/01 Lot 1, Lot 2, Lot 3</b>								
Sr. No.	Field /Issue	Mitigation Activities and Method	Parameters monitored	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
		Habitats like Grasslands.						
15	Stockpiling of construction materials	Stockpiling of construction materials and excavated earth or silt in case of construction of river bed filtration does not impact obstruct the drainage and Stockpiles will be covered to protect from dust and erosion.	Selected location and facility	Project Locations	Contractor	Site checking	Environment Specialist of DSC and Environment Officer of PMU	Complied
16	Access to Site	Contractors shall ensure that all side drains and scour check walls on access and haul roads are functioning properly and are well maintained. Contractors shall ensure that access roads are maintained in good condition	<ul style="list-style-type: none"> <li>• Involvement of traffic dept.</li> <li>• Road closure planning</li> <li>• Maintenance of road</li> </ul>	Specific project location	Contractor	Site observation	Environment Specialist of DSC and Environment Officer of PMU	Complied
17	Quarry Operations	Contractor shall finalize the quarry for procurement of construction materials after assessment of the availability of sufficient quantity of materials, quality and other logistic arrangements. The Contractor shall obtain materials from approved quarries only after consent of the Department of Mines and Geology and District Administration.	<ul style="list-style-type: none"> <li>• List of approved quarry sites and sources of materials</li> <li>• Construction Contractor documentation</li> </ul>	Quarries and material source areas	Contractor	Site observation	Environment Specialist of DSC and Environment Officer of PMU	Complied
18	Arrangement for Construction Water	The contractor shall use ground/surface water as a source of water for the construction with the written consent from the concerned Department.	Water source locations	Project locations	Contractor	Site observation	Environment Specialist of DSC and Environment Officer of PMU	Arranged as per EMP

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Sr. No.	Field /Issue	Mitigation Activities and Method	Parameters monitored	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
		The Contractor shall provide a list of locations and type of sources from where water for construction shall be extracted.						
19	Soil/land Erosion	Slope protection measures will be undertaken as per design to control soil erosion. There shall be a periodic checking of the site's drainage system by DSC, PIU/IA and PMU to ensure that the water flow is unobstructed.	Slope protection work	Construction locations	Contractor	Site observation	Environment Specialist of DSC and Environment Officer of PMU	Complied
20	Water Pollution from Construction Wastes	The Contractor shall take all precautionary measures to prevent entering of wastewater into streams, water bodies or the irrigation system during construction. Waste will be disposed of to a suitable waste site in accordance with Hazardous Wastes (Management, Handling and Transboundary movement) Rules, 2008 and amendments till date and applicable norms	<ul style="list-style-type: none"> <li>Water pollution</li> <li>Complaint from sensitive receptors</li> </ul>	Project locations	Contractor	Site observation	Environment Specialist of DSC and Environment Officer of PMU	Complied
21	Water Pollution from Fuel and Lubricants	The Contractor shall ensure that all construction vehicle parking locations, fuel/lubricants storage sites, vehicle, machinery and equipment maintenance and refueling sites shall be located at least 300 m away from rivers/streams and irrigation canal/ponds if any	<ul style="list-style-type: none"> <li>Water pollution</li> <li>Complaint from sensitive receptors</li> </ul>	Project locations	Contractor	Site observation	Environment Specialist of DSC and Environment Officer of PMU	Complied

<b>Project: Water Supply - Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc. at Kapkot, Bageshwar &amp; Dharchula</b> <b>Package No: UK/UEAP-WSS-KU/01 Lot 1, Lot 2, Lot 3</b>								
Sr. No.	Field /Issue	Mitigation Activities and Method	Parameters monitored	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
22	Soil Pollution due to fuel and lubricants, construction waste	The fuel storage and vehicle cleaning area will be stationed such that spillage of fuels and lubricants does not contaminate the ground. All pollution parameters will be monitored as per monitoring plan.	<ul style="list-style-type: none"> <li>• Soil pollution-contamination of ground</li> </ul>	Project locations	Contractor	Site observation	Environment Specialist of DSC and Environment Officer of PMU	Complied
23	Generation of dust	The contractor will take every precaution to reduce the levels of dust at construction site. Regular sprinkling of water and Stockpiles of soil will be kept covered in such a manner to minimize dust generation	<ul style="list-style-type: none"> <li>• Location of stockpiles</li> <li>• Complaints from sensitive receptors</li> <li>• Monitoring data</li> <li>• Water sprinkling arrangement</li> <li>• Cover materials</li> </ul>	Project locations	Contractor	<ul style="list-style-type: none"> <li>• Checking of records</li> <li>• Visual inspection of sites</li> </ul>	Environment Specialist of DSC and Environment Officer of PMU	Complied Location of stockpiles selected. Water sprinkling done. Base line and during construction air quality monitoring done as per EMP
24	Emission from Construction Vehicles, Equipment and Machinery	All vehicles, equipment and machinery used for construction shall confirm to the relevant Bureau of India Standard (BIS) norms. The discharge standards promulgated under the Environment Protection Act, 1986 shall be strictly adhered to. The use of silent/quiet equipment compliant with India ambient noise standards and	<ul style="list-style-type: none"> <li>• Heavy equipment and machinery with air pollution control</li> <li>• Availability of PUC</li> </ul>	Project locations	Contractor	<ul style="list-style-type: none"> <li>• Checking of records</li> <li>• Visual inspection of sites</li> </ul>	Environment Specialist of DSC and Environment Officer of PMU	PUC certificate submitted by contractor

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Sr. No.	Field /Issue	Mitigation Activities and Method	Parameters monitored	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
		standards specified for manufacturers shall be encouraged in the sub Project. The Contractor shall maintain a record of PUC for all vehicles and machinery used during the contract period which shall be produced for verification whenever required.	certificate					
25	Noise Pollution	<p>The Contractor shall confirm that all Construction equipment used in construction shall strictly conform to the MoEF/CPCB noise standards and all Vehicles and equipment used in construction shall be fitted with exhaust silencers.</p> <p>At the construction sites noisy construction work such as crushing, operation of DG sets, use of high noise generation equipment shall be stopped during the night time between 10.00 pm to 6.00 am.</p> <p>Noise limits for construction equipment used in this project will be in conformity to the BIS/SPCB/CPCB standards</p> <p>Regular monitoring of ambient noise levels to ensure compliance to Uttarakhand Environment Protection &amp; Pollution Control Board standards.</p>	<ul style="list-style-type: none"> <li>Complaints from sensitive receptors</li> <li>Use of silencers in noise-producing equipment and sound barriers</li> <li>Monitoring data</li> </ul>	Project Locations	Contractor	<ul style="list-style-type: none"> <li>Checking of records</li> <li>Visual inspection of sites</li> </ul>	Environment Specialist of DSC and Environment Officer of PMU	<p>Complied</p> <p>No such noise producing machinery mobilized at site PPE being used</p> <p>Base line monitoring done.</p> <p>During construction noise monitoring also done</p>

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Sr. No.	Field /Issue	Mitigation Activities and Method	Parameters monitored	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
26	Material Handling at Site	Workers Employed on mixing cement, lime mortars, concrete etc., will be provided with protective footwear and protective masks and goggles. Workers, who are engaged in welding works, will be provided with welder's protective eye-shields. Workers engaged in stone breaking activities will be provided with protective goggles, masks, and clothing. All concrete mixing must take place on a designated, impermeable surface.	Available protective equipments	Project Locations	Contractor	Site observation	Environment Specialist of DSC and Environment Officer of PMU	Complied.
27	Damage, and disturbance to other infrastructure in the construction site	Confirm location of infrastructure. Finalize alignment in coordination with agencies like Uttarakhand Power Corporation Limited, Bharat Sanchar Nigam Limited, etc. Ensure prior permission of respective agency Realign pipelines, if required and subsequently revise IEE Provide public information in case of service disruptions	List of affected utilities / infrastructure if any and operators	Specific project location	Contractor	Observation and document checking	Environment Specialist of DSC and Environment Officer of PMU	Complied wherever required
28	Disposal of Construction Waste / Debris / Cut Material	The Contractor shall confirm that Safe disposal of the construction waste will be ensured in the pre-identified disposal locations. In no case, any construction waste will be disposed around	<ul style="list-style-type: none"> <li>Waste Management List</li> <li>Complaints from</li> </ul>	Project Locations	Contractor	Site observation	Environment Specialist of DSC and Environment Officer of PMU	Complied and excess earth utilized

<b>Project: Water Supply - Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc. at Kapkot, Bageshwar &amp; Dharchula</b> <b>Package No: UK/UEAP-WSS-KU/01 Lot 1, Lot 2, Lot 3</b>								
Sr. No.	Field /Issue	Mitigation Activities and Method	Parameters monitored	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
		the project site indiscriminately.	sensitive receptors					
29	Disruption / cessation of existing water supply systems due to construction activity.	Care to be taken during improvement of existing water supply systems, so that disruption in existing water supply would not occur. Tentative schedule of closure should be known to affected people prior to cessation of water supply. In case disruption of water supply exceeds the intimated schedule, arrangement for supply of potable water should be made.	<ul style="list-style-type: none"> <li>Schedule of closure</li> </ul>	Project site	Contractor, PIU	Checking of records Visual observation	Environment Specialist of DSC and Environment Officer of PMU	Not required
30	Safety Measures During Construction	Personal Protective Equipment for workers on the project and adequate safety measures for workers during handling of materials at site will be taken up. The contractor has to comply with all regulations regarding safe scaffolding, ladders, working platforms, gangway, stairwells, excavations, trenches and safe means of entry and egress. The contractor has to comply with all regulations for the safety of workers. Precaution will be taken to prevent danger of the workers from fire, etc. First aid treatment will be made available for all injuries likely to	<ul style="list-style-type: none"> <li>Site-specific Health and Safety (H&amp;S) Plan</li> <li>Equipped first-aid stations;</li> <li>Medical insurance coverage for workers</li> <li>Supplies of potable drinking water;</li> </ul>	Project Locations	Contractor	Document check and visual observation	Environment Specialist of DSC and Environment Officer of PMU	PPE used by contractor First aid box available  Safety tape / barricade provided  Potable Drinking water available at site.  Safety signage

<b>Project: Water Supply - Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc. at Kapkot, Bageshwar &amp; Dharchula</b> <b>Package No: UK/UEAP-WSS-KU/01 Lot 1, Lot 2, Lot 3</b>								
Sr. No.	Field /Issue	Mitigation Activities and Method	Parameters monitored	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
		be sustained during the course of work. Contractor shall also organize periodic visits by a qualified registered medical practitioner to the site and workers camp. Contact information of Doctor, availability & location of first aid box shall be displayed in appropriate language both at work site and workers camp. The Contractor will also ensure that the interests of the community are preferably not disturbed, and if unavoidable then disturbed to the minimum. Provide traffic management personnel, barricade, appropriate signage and safety information in and around the construction site and prevent local people entering into the construction site.	<ul style="list-style-type: none"> <li>Record of H&amp;S orientation trainings</li> <li>Personal protective equipments</li> <li>Sign boards for comply public safety</li> <li>Complaints from sensitive receptors</li> <li>Number of signages placed at subproject location</li> </ul>					present at site
31	Clearing of Construction of Camps and Restoration	Contractor to prepare site restoration plans for approval by the Engineer. The plan is to be implemented by the contractor prior to demobilization.	Site restoration plan	Project Locations	Contractor	Site observation	Environment Specialist of DSC and Environment Officer of PMU	Not required as no labour or construction camp
32	Risk of archaeological chance finds	Strictly follow the protocol for chance finds in any excavation work; Request FPIU/DSC or any authorized person with archaeological field training to observe	Chance find protocol	Project Locations	Contractor	Checking of record	Environment Specialist of DSC and Environment Officer of PMU	Not required

<b>Project: Water Supply - Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc. at Kapkot, Bageshwar &amp; Dharchula</b> <b>Package No: UK/UEAP-WSS-KU/01 Lot 1, Lot 2, Lot 3</b>								
Sr. No.	Field /Issue	Mitigation Activities and Method	Parameters monitored	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
		excavation; Stop work immediately to allow further investigation if any finds are suspected; and Inform FPIU/DSC, and take any action they require ensuring its removal or protection in situ.						
33	Conflict with locals	Contractor shall ensure that mostly the local labourers are employed and migratory laborer shall be employed only in case of unavoidable circumstances.	Employment record	Project Locations	Contractor	Checking of records	Environment Specialist of DSC and Environment Officer of PMU	Complied  Local labours are employed
34	Environment Safeguard Officer	Contractor shall appoint one full-time suitably qualified and experienced Environment and Safety Officer who shall be responsible for assisting contractor in implementation of EMP, community liaisoning, consultations with interested/affected parties, reporting and grievance redressal on day-to-day basis. This environment and safety officer will be at site till all works related to the project including demobilization are completed.	Available Environment and safety officer	Project site/ Office	Contractor	Observation, checking of presence and activity	Environment Specialist of DSC and Environment Officer of PMU	Complied

<b>Project: Water Supply</b> - Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc. <b>Rudraprayag , Karanprayag, Gauchar, Uttarkashi &amp; Devprayag</b> <b>Package No: UK/UEAP-WSS-GW/01- Lot 1, Lot 2, Lot 3, Lot 4 &amp; Lot 5</b>								
Sr. No.	Field /Issue	Mitigation Activities and Method	Parameters monitored	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
<b>Site Establishment and Preliminary Activities phase</b>								
1	Legislation, Permits and Agreements	In all instances, EA, IA contractors and consultants must remain in compliance with relevant environmental legislation of India at the national, state and local levels. Proof of compliance to statutory requirements must be forwarded by the facility owner and/or contractor to PMU/PIU in relation to hot mixing, stone crushers, diesel generators etc. A copy of the EMP must be kept on site during the construction period	EMP at site  NOC from competent authority	All project sites	DSC/PIU	Observation and document checking	Environment Specialist of DSC and Environment Officer of PMU	NOC not required  EMP available with PIU
2	Education of site staff on general and Environmental Conduct	Ensure that all site personnel have a basic level of environmental awareness training Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task No operator shall be permitted to operate critical items of mechanical equipment without having been trained by the Contractor.	Documentation – Training and awareness	All project sites	DSC/PIU	Materials and records on awareness training program	Environment Specialist of DSC and Environment Officer of PMU	Complied Site Safety training arranged by Environment Specialist of DSC and contractor Environment officer
3	Social Impacts	Open liaison channels shall be established between the Site owner, operator, the contractors and interested and affected	Sign boards  Project	All project sites	DSC/PIU	Materials and records on awareness	Environment Specialist of DSC and Environment	Complied

<b>Project: Water Supply</b> - Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc. <b>Rudraprayag , Karanprayag, Gauchar, Uttarkashi &amp; Devprayag</b> <b>Package No: UK/UEAP-WSS-GW/01- Lot 1, Lot 2, Lot 3, Lot 4 &amp; Lot 5</b>								
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		parties such that any queries, complaints or suggestions pertaining to environmental management aspects can be dealt with quickly and by the appropriate person(s). Provide sign boards for pedestrians to inform nature and duration of construction works and contact numbers for concerns/complaints.	information dissemination			training program	Officer of PMU	
4	Lack of sufficient planning to assure long term sustainability of the improvements and ensure protection of the assets created and the architectural /archaeological character of the surroundings	Design will include provisions for ensuring effective maintenance and protection of the assets created so as to ensure the long term sustainability.	Maintenance procedure as per design	All project sites	PMU/PIU	Observation and document checking	Environment Specialist of DSC and Environment Officer of PMU	Complied in design
5	Layout of components and its location to avoid impacts on the aesthetics, sensitive environmental areas / attributes of the site	The project components siting will avoid impacts on the aesthetics of the site, ensure minimal impacts and in compliance with statutory and regulatory requirements.	Layout of components	All project locations	PMU/PIU/ DSC	Observation and document checking	Environment Specialist of DSC and Environment Officer of PMU	Complied in design and EMP

<b>Project: Water Supply</b> - Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc. <b>Rudraprayag , Karanprayag, Gauchar, Uttarkashi &amp; Devprayag</b> <b>Package No: UK/UEAP-WSS-GW/01- Lot 1, Lot 2, Lot 3, Lot 4 &amp; Lot 5</b>								
Sr. No.	Field /Issue	Mitigation Activities and Method	Parameters monitored	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
6	Selection of materials and construction technologies, if not carefully chosen, will adversely impact the aesthetic appeal of the destinations	Selection of materials will be according to specification and from approved sources Procurement of all material according to the material specification of the contract document and sourced from licensed and approved sources.	<ul style="list-style-type: none"> <li>List of approved quarry sites and sources of materials</li> <li>Construction Contractor documentation</li> </ul>	Material source sites	Contractor, PIU, DSC	<ul style="list-style-type: none"> <li>Checking of records</li> <li>Visual inspection of sites</li> </ul>	PMU	Complied
7	Socio cultural resources- Ground disturbance can uncover and damage archaeological and historical remains`	There is not such location anticipated on the project site. In case of chance of finding such location, Consult Archaeological Survey of India (ASI) and/or concerned dept. of Uttarakhand Govt. as applicable to obtain an expert assessment of the archaeological potential of the site	Chance find protocol	All project locations	PIU, PMU	Site observation, document checking	Environment Specialist of DSC and Environment Officer of PMU	NR
8	Integration of energy efficiency and energy conservation programs in design of sub-project components	The detailed designs for the sub-project components shall ensure that environmental sustainability principles, including energy efficiency, resource recycling, waste minimization, rainwater harvesting etc.	Detailed design	All project locations	DSC, PMU	Document checking and site feasibility	PMU	Complied
9	Site clearance activities, including delineation of construction areas	Any removal of vegetation or tree felling shall be done after taking statutory permissions if required. All works shall be carried out such that the damage or disruption of flora other	Necessary permission/ NOC	All project locations	DSC, PIU	Document checking	Environment Specialist of DSC and Environment Officer of PMU	Complied Restoration being done

<b>Project: Water Supply</b> - Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc. <b>Rudraprayag , Karanprayag, Gauchar, Uttarkashi &amp; Devprayag</b> <b>Package No: UK/UEAP-WSS-GW/01- Lot 1, Lot 2, Lot 3, Lot 4 &amp; Lot 5</b>								
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		<p>than those identified for cutting is minimum.</p> <p>Only ground cover/shrubs that impinge directly on the permanent works or necessary temporary works shall be removed with prior approval from the Environmental Expert of DSC</p> <p>All areas used for temporary construction operations will be subject to complete restoration to their former condition with appropriate rehabilitation procedures as per the rehabilitation plan</p>						
10	Blockage of access in residential area, commercial area and sensitive location like school, college, hospitals and court	Contractor will identify such location in the preconstruction stage and prepare plan approved by DSC to minimize inconvenience to the people.	Complain from sensitive receptors	Construction location	PMU/DSC	Observation and checking of design	Environment Specialist of DSC and Environment Officer of PMU	Complied
11	Slope protection near reservoir and intake well	Retaining wall will constructed near reservoir and intake well	Protection work	-	PMU/DSC	Observation and checking of design	Environment Specialist of DSC and Environment Officer of PMU	Complied in design and EMP
<b>Construction phase</b>								

<b>Project: Water Supply</b> - Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc. <b>Rudraprayag , Karanprayag, Gauchar, Uttarkashi &amp; Devprayag</b> <b>Package No: UK/UEAP-WSS-GW/01- Lot 1, Lot 2, Lot 3, Lot 4 &amp; Lot 5</b>								
Sr. No.	Field /Issue	Mitigation Activities and Method	Parameters monitored	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
12	Construction Camps - Location, Selection, Design and Layout	<p>Siting of the construction camps, labour camp, and stockpiles shall be as per the guidelines of UEPPCB, ULB, village panchayat and any other applicable guideline to the local site. The contractor will assess the impact of the construction camp and should be acceptable to the PIU/ IA/PMU.</p> <p>Construction camps will be located away from settlements and drainage from and through the camps will not endanger any domestic or public water supply. Construction camps including sanitation facilities must be adequately drained.</p> <p>Sewage management through septic tanks and solid waste management through local ULB system or other alternate measures.</p>	Selected location for construction work camps and stockpile area,	Construction camp site	Contractor	Site observation	Environment Specialist of DSC and Environment Officer of PMU	No Labour camp , Workers are living in rented house all facilities provided as per EMP
13	Drinking water availability	Sufficient supply of potable water to be provided and maintained as per the standards, requirements, test methods and sampling procedure according to IS:10500.	Availability of drinking water	Working and camp site	Contractor	Site observation	Environment Specialist of DSC and Environment Officer of PMU	Provided at working site and living place
14	Waste disposal	Pre-identified disposal location (identified by Contractor in compliance to relevant regulation and approved by DSC) shall be part of Comprehensive Waste Disposal Plan Solid	<ul style="list-style-type: none"> <li>Waste Management List</li> <li>Complaints</li> </ul>	Project Locations	Contractor	<ul style="list-style-type: none"> <li>Checking of records</li> <li>Visual</li> </ul>	Environment Specialist of DSC and Environment	Under compliance Utilization of

<b>Project: Water Supply</b> - Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc. <b>Rudraprayag , Karanprayag, Gauchar, Uttarkashi &amp; Devprayag</b> <b>Package No: UK/UEAP-WSS-GW/01- Lot 1, Lot 2, Lot 3, Lot 4 &amp; Lot 5</b>								
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		Waste Management Plan. Contractor shall ensure that waste shall not be disposed off near the water course or agricultural land, Orchards and Natural Habitats like Grasslands.	from sensitive receptors			inspection of sites	Officer of PMU	excess earth being done.
15	Stockpiling of construction materials	Stockpiling of construction materials and excavated earth or silt in case of construction of river bed filtration does not impact obstruct the drainage and Stockpiles will be covered to protect from dust and erosion.	Selected location and facility	Project Locations	Contractor	Site checking	Environment Specialist of DSC and Environment Officer of PMU	Complied
16	Access to Site	Contractors shall ensure that all side drains and scour check walls on access and haul roads are functioning properly and are well maintained. Contractors shall ensure that access roads are maintained in good condition	<ul style="list-style-type: none"> <li>• Involvement of traffic dept.</li> <li>• Road closure planning</li> <li>• Maintenance of road</li> </ul>	Specific project location	Contractor	Site observation	Environment Specialist of DSC and Environment Officer of PMU	Complied
17	Quarry Operations	Contractor shall finalize the quarry for procurement of construction materials after assessment of the availability of sufficient quantity of materials, quality and other logistic arrangements. The Contractor shall obtain materials from approved quarries only after consent of the Department of Mines and Geology and District	<ul style="list-style-type: none"> <li>• List of approved quarry sites and sources of materials</li> <li>• Construction Contractor documentation</li> </ul>	Quarries and material source areas	Contractor	Site observation	Environment Specialist of DSC and Environment Officer of PMU	Complied

<b>Project: Water Supply</b> - Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc. <b>Rudraprayag , Karanprayag, Gauchar, Uttarkashi &amp; Devprayag</b> <b>Package No: UK/UEAP-WSS-GW/01- Lot 1, Lot 2, Lot 3, Lot 4 &amp; Lot 5</b>								
Sr. No.	Field /Issue	Mitigation Activities and Method	Parameters monitored	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
		Administration.						
18	Arrangement for Construction Water	The contractor shall use ground/surface water as a source of water for the construction with the written consent from the concerned Department. The Contractor shall provide a list of locations and type of sources from where water for construction shall be extracted.	Water source locations	Project locations	Contractor	Site observation	Environment Specialist of DSC and Environment Officer of PMU	Arranged in consultation with PIU
19	Soil/land Erosion	Slope protection measures will be undertaken as per design to control soil erosion. There shall be a periodic checking of the site's drainage system by DSC, PIU/IA and PMU to ensure that the water flow is unobstructed.	Slope protection work	Construction locations	Contractor	Site observation	Environment Specialist of DSC and Environment Officer of PMU	Under Compliance
20	Water Pollution from Construction Wastes	The Contractor shall take all precautionary measures to prevent entering of wastewater into streams, water bodies or the irrigation system during construction. Waste will be disposed of to a suitable waste site in accordance with Hazardous Wastes (Management, Handling and Transboundary movement) Rules, 2008 and amendments till date and applicable norms	<ul style="list-style-type: none"> <li>Water pollution</li> <li>Complaint from sensitive receptors</li> </ul>	Project locations	Contractor	Site observation	Environment Specialist of DSC and Environment Officer of PMU	Arranged near water source
21	Water Pollution from Fuel and Lubricants	The Contractor shall ensure that all construction vehicle parking locations, fuel/	<ul style="list-style-type: none"> <li>Water</li> </ul>	Project	Contractor	Site	Environment Specialist of	Complied

<b>Project: Water Supply</b> - Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc. <b>Rudraprayag , Karanprayag, Gauchar, Uttarkashi &amp; Devprayag</b> <b>Package No: UK/UEAP-WSS-GW/01- Lot 1, Lot 2, Lot 3, Lot 4 &amp; Lot 5</b>								
Sr. No.	Field /Issue	Mitigation Activities and Method	Parameters monitored	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
		lubricants storage sites, vehicle, machinery and equipment maintenance and refueling sites shall be located at least 300 m away from rivers/streams and irrigation canal/ponds if any	<ul style="list-style-type: none"> <li>pollution</li> <li>Complaint from sensitive receptors</li> </ul>	locations		observation	DSC and Environment Officer of PMU	
22	Soil Pollution due to fuel and lubricants, construction waste	The fuel storage and vehicle cleaning area will be stationed such that spillage of fuels and lubricants does not contaminate the ground. All pollution parameters will be monitored as per monitoring plan.	<ul style="list-style-type: none"> <li>Soil pollution-contamination of ground</li> </ul>	Project locations	Contractor	Site observation	Environment Specialist of DSC and Environment Officer of PMU	Complied
23	Generation of dust	The contractor will take every precaution to reduce the levels of dust at construction site. Regular sprinkling of water and Stockpiles of soil will be kept covered in such a manner to minimize dust generation	<ul style="list-style-type: none"> <li>Location of stockpiles</li> <li>Complaints from sensitive receptors</li> <li>Monitoring data</li> <li>Water sprinkling arrangement</li> <li>Cover materials</li> </ul>	Project locations	Contractor	<ul style="list-style-type: none"> <li>Checking of records</li> <li>Visual inspection of sites</li> </ul>	Environment Specialist of DSC and Environment Officer of PMU	Complied Location of stockpiles selected. Covering of materials implemented Water sprinkling being done. Base line air quality monitoring done and during construction monitoring also

<b>Project: Water Supply</b> - Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc. <b>Rudraprayag , Karanprayag, Gauchar, Uttarkashi &amp; Devprayag</b> <b>Package No: UK/UEAP-WSS-GW/01- Lot 1, Lot 2, Lot 3, Lot 4 &amp; Lot 5</b>								
Sr. No.	Field /Issue	Mitigation Activities and Method	Parameters monitored	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
								done as per EMP
24	Emission from Construction Vehicles, Equipment and Machinery	All vehicles, equipment and machinery used for construction shall confirm to the relevant Bureau of India Standard (BIS) norms. The discharge standards promulgated under the Environment Protection Act, 1986 shall be strictly adhered to. The use of silent/quiet equipment compliant with India ambient noise standards and standards specified for manufacturers shall be encouraged in the sub Project. The Contractor shall maintain a record of PUC for all vehicles and machinery used during the contract period which shall be produced for verification whenever required.	<ul style="list-style-type: none"> <li>Heavy equipment and machinery with air pollution control</li> <li>Availability of PUC certificate</li> </ul>	Project locations	Contractor	<ul style="list-style-type: none"> <li>Checking of records</li> <li>Visual inspection of sites</li> </ul>	Environment Specialist of DSC and Environment Officer of PMU	PUC certificate submitted
25	Noise Pollution	The Contractor shall confirm that all Construction equipment used in construction shall strictly conform to the MoEF/CPCB noise standards and all Vehicles and equipment used in construction shall be fitted with exhaust silencers. At the construction sites noisy construction	<ul style="list-style-type: none"> <li>Complaints from sensitive receptors</li> <li>Use of silencers in noise-producing equipment</li> </ul>	Project Locations	Contractor	<ul style="list-style-type: none"> <li>Checking of records</li> <li>Visual inspection of sites</li> </ul>	Environment Specialist of DSC and Environment Officer of PMU	Complied  No such noise producing machinery mobilized at site  PPE in use

<b>Project: Water Supply</b> - Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc. <b>Rudraprayag , Karanprayag, Gauchar, Uttarkashi &amp; Devprayag</b> <b>Package No: UK/UEAP-WSS-GW/01- Lot 1, Lot 2, Lot 3, Lot 4 &amp; Lot 5</b>								
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		work such as crushing, operation of DG sets, use of high noise generation equipment shall be stopped during the night time between 10.00 pm to 6.00 am. Noise limits for construction equipment used in this project will be in conformity to the BIS/SPCB/CPCB standards Regular monitoring of ambient noise levels to ensure compliance to Uttarakhand Environment Protection & Pollution Control Board standards.	and sound barriers • Monitoring data					Base line monitoring done.  During construction monitoring also done
26	Material Handling at Site	Workers Employed on mixing cement, lime mortars, concrete etc., will be provided with protective footwear and protective masks and goggles. Workers, who are engaged in welding works, will be provided with welder's protective eye-shields. Workers engaged in stone breaking activities will be provided with protective goggles, masks, and clothing. All concrete mixing must take place on a designated, impermeable surface.	Available protective equipments	Project Locations	Contractor	Site observation	Environment Specialist of DSC and Environment Officer of PMU	Complied.

<b>Project: Water Supply</b> - Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc. <b>Rudraprayag , Karanprayag, Gauchar, Uttarkashi &amp; Devprayag</b> <b>Package No: UK/UEAP-WSS-GW/01- Lot 1, Lot 2, Lot 3, Lot 4 &amp; Lot 5</b>								
Sr. No.	Field /Issue	Mitigation Activities and Method	Parameters monitored	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
27	Damage, and disturbance to other infrastructure in the construction site	Confirm location of infrastructure. Finalize alignment in coordination with agencies like Uttarakhand Power Corporation Limited, Bharat Sanchar Nigam Limited, etc. Ensure prior permission of respective agency Realign pipelines, if required and subsequently revise IEE Provide public information in case of service disruptions	List of affected utilities / infrastructure if any and operators	Specific project location	Contractor	Observation and document checking	Environment Specialist of DSC and Environment Officer of PMU	Not required
28	Disposal of Construction Waste / Debris / Cut Material	The Contractor shall confirm that Safe disposal of the construction waste will be ensured in the pre-identified disposal locations. In no case, any construction waste will be disposed around the project site indiscriminately.	<ul style="list-style-type: none"> <li>Waste Management List</li> <li>Complaints from sensitive receptors</li> </ul>	Project Locations	Contractor	Site observation	Environment Specialist of DSC and Environment Officer of PMU	Complied  Utilization of excess earth and demolish waste done
29	Disruption / cessation of existing water supply systems due to construction activity.	Care to be taken during improvement of existing water supply systems, so that disruption in existing water supply would not occur. Tentative schedule of closure should be known to affected people prior to cessation of water supply. In case disruption of water supply exceeds the intimated schedule, arrangement for supply of	<ul style="list-style-type: none"> <li>Schedule of closure</li> </ul>	Project site	Contractor, PIU	Checking of records Visual observation	Environment Specialist of DSC and Environment Officer of PMU	Not required

<b>Project: Water Supply</b> - Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc. <b>Rudraprayag , Karanprayag, Gauchar, Uttarkashi &amp; Devprayag</b> <b>Package No: UK/UEAP-WSS-GW/01- Lot 1, Lot 2, Lot 3, Lot 4 &amp; Lot 5</b>								
Sr. No.	Field /Issue	Mitigation Activities and Method	Parameters monitored	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
		potable water should be made.						
30	Safety Measures During Construction	<p>Personal Protective Equipment for workers on the project and adequate safety measures for workers during handling of materials at site will be taken up. The contractor has to comply with all regulations regarding safe scaffolding, ladders, working platforms, gangway, stairwells, excavations, trenches and safe means of entry and egress.</p> <p>The contractor has to comply with all regulations for the safety of workers. Precaution will be taken to prevent danger of the workers from fire, etc. First aid treatment will be made available for all injuries likely to be sustained during the course of work. Contractor shall also organize periodic visits by a qualified registered medical practitioner to the site and workers camp. Contact information of Doctor, availability &amp; location of first aid box shall be displayed in appropriate language both at work site and workers camp. The Contractor will also ensure that the interests of the community are preferably not disturbed, and if unavoidable then disturbed to</p>	<ul style="list-style-type: none"> <li>• Site-specific Health and Safety (H&amp;S) Plan</li> <li>• Equipped first-aid stations;</li> <li>• Medical insurance coverage for workers</li> <li>• Supplies of potable drinking water;</li> <li>• Record of H&amp;S orientation trainings</li> <li>• Personal protective equipments</li> <li>• Sign boards for comply public safety</li> <li>• Complaints from sensitive receptors</li> </ul>	Project Locations	Contractor	Document check and visual observation	Environment Specialist of DSC and Environment Officer of PMU	<p>PPE used by contractor</p> <p>First aid box available</p> <p>Safety tape / barricade provided</p> <p>Supplies of potable drinking water at all sites</p> <p>Sign board at all sites</p> <p>Overall complied</p>

<b>Project: Water Supply</b> - Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc. <b>Rudraprayag , Karanprayag, Gauchar, Uttarkashi &amp; Devprayag</b> <b>Package No: UK/UEAP-WSS-GW/01- Lot 1, Lot 2, Lot 3, Lot 4 &amp; Lot 5</b>								
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		the minimum. Provide traffic management personnel, barricade, appropriate signage and safety information in and around the construction site and prevent local people entering into the construction site.	<ul style="list-style-type: none"> <li>Number of signages placed at subproject location</li> </ul>					
31	Clearing of Construction of Camps and Restoration	Contractor to prepare site restoration plans for approval by the Engineer. The plan is to be implemented by the contractor prior to demobilization.	Site restoration plan	Project Locations	Contractor	Site observation	Environment Specialist of DSC and Environment Officer of PMU	Not required as workers are living in rented house
32	Risk of archaeological chance finds	Strictly follow the protocol for chance finds in any excavation work; Request FPIU/DSC or any authorized person with archaeological field training to observe excavation; Stop work immediately to allow further investigation if any finds are suspected; and Inform FPIU/DSC, and take any action they require ensuring its removal or protection in situ.	Chance find protocol	Project Locations	Contractor	Checking of record	Environment Specialist of DSC and Environment Officer of PMU	Not required till date
33	Conflict with locals	Contractor shall ensure that mostly the local labourers are employed and migratory laborer shall be employed only in case of unavoidable circumstances.	Employment record	Project Locations	Contractor	Checking of records	Environment Specialist of DSC and Environment Officer of PMU	Complied  Local labours are employed

<b>Project: Water Supply</b> - Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc. <b>Rudraprayag , Karanprayag, Gauchar, Uttarkashi &amp; Devprayag</b> <b>Package No: UK/UEAP-WSS-GW/01- Lot 1, Lot 2, Lot 3, Lot 4 &amp; Lot 5</b>								
Sr. No.	Field /Issue	Mitigation Activities and Method	Parameters monitored	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
34	Environment Safeguard Officer	Contractor shall appoint one full-time suitably qualified and experienced Environment and Safety Officer who shall be responsible for assisting contractor in implementation of EMP, community liaisoning, consultations with interested/affected parties, reporting and grievance redressal on day-to-day basis. This environment and safety officer will be at site till all works related to the project including demobilization are completed.	Available Environment and safety officer	Project site/ Office	Contractor	Observation, checking of presence and activity	Environment Specialist of DSC and Environment Officer of PMU	Complied

<b>Project: Water Supply</b> - Construction of low level pump house, installation of raw water and clear water pumping machinery, Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains, Rehabilitation of WTP's Design, Supply, Construction and Commissioning of Infiltration Wells, Construction of Sump and Electrical and Instrumentation works at Srinagar  <b>Project:</b> Supply, Laying, Jointing, Testing and Commissioning of Tubewells at Srinagar  <b>Package No: UK/UEAP-WSS-GW/02 and UK/UEAP-WSS-GW/02-01</b>								
Sr. No.	Field /Issue	Mitigation Activities and Method	Parameters monitored	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
<b>Site Establishment and Preliminary Activities phase</b>								
1	Legislation, Permits and Agreements	In all instances, EA, IA contractors and consultants must remain in compliance with relevant environmental legislation of India at the national, state and local levels. Proof of compliance to statutory requirements must be forwarded by the facility owner and/or contractor to PMU/PIU in relation to hot mixing, stone crushers, diesel generators etc. A copy of the EMP must be kept on site during the construction period	EMP at site  NOC from competent authority	All project sites	DSC/PIU	Observation and document checking	Environment Specialist of DSC and Environment Officer of PMU	NOC not required  EMP available with PIU
2	Education of site staff on general and Environmental Conduct	Ensure that all site personnel have a basic level of environmental awareness training Staff operating equipment (such as excavators, loaders, etc.) shall be adequately trained and sensitized to any potential hazards associated with their task No operator shall be permitted to operate critical items of mechanical equipment without having been trained by the Contractor.	Documentation – Training and awareness	-	DSC/PIU	Materials and records on awareness training program	Environment Specialist of DSC and Environment Officer of PMU	Complied Site Safety training arranged by Environment Specialist of DSC Tool box training will be required on regular basis
3	Social Impacts	Open liaison channels shall be established between the Site owner, operator, the	Sign boards  Project	-	DSC/PIU	Materials and records on	Environment Specialist of DSC and	Complied

<b>Project: Water Supply</b> - Construction of low level pump house, installation of raw water and clear water pumping machinery, Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains, Rehabilitation of WTP's Design, Supply, Construction and Commissioning of Infiltration Wells, Construction of Sump and Electrical and Instrumentation works at Srinagar  <b>Project:</b> Supply, Laying, Jointing, Testing and Commissioning of Tubewells at Srinagar  <b>Package No: UK/UEAP-WSS-GW/02 and UK/UEAP-WSS-GW/02-01</b>								
Sr. No.	Field /Issue	Mitigation Activities and Method	Parameters monitored	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
		contractors and interested and affected parties such that any queries, complaints or suggestions pertaining to environmental management aspects can be dealt with quickly and by the appropriate person(s). Provide sign boards for pedestrians to inform nature and duration of construction works and contact numbers for concerns/complaints.	information dissemination			awareness training program	Environment Officer of PMU	
4	Lack of sufficient planning to assure long term sustainability of the improvements and ensure protection of the assets created and the architectural/archaeological character of the surroundings	Design will include provisions for ensuring effective maintenance and protection of the assets created so as to ensure the long term sustainability.	Maintenance procedure as per design	-	PMU/PIU	Observation and document checking	Environment Specialist of DSC and Environment Officer of PMU	Complied in design
5	Layout of components and its location to avoid	The project components siting will avoid impacts on the aesthetics of the site, ensure minimal impacts and in compliance with	Layout of components	All project locations	PMU/PIU/ DSC	Observation and document checking	Environment Specialist of DSC and Environment	Complied in design and EMP

**Project: Water Supply** - Construction of low level pump house, installation of raw water and clear water pumping machinery, Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains, Rehabilitation of WTP's Design, Supply, Construction and Commissioning of Infiltration Wells, Construction of Sump and Electrical and Instrumentation works at Srinagar

**Project:** Supply, Laying, Jointing, Testing and Commissioning of Tubewells at Srinagar

**Package No:** UK/UEAP-WSS-GW/02 and UK/UEAP-WSS-GW/02-01

Sr. No.	Field /Issue	Mitigation Activities and Method	Parameters monitored	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
	impacts on the aesthetics, sensitive environmental areas / attributes of the site	statutory and regulatory requirements.					Officer of PMU	
6	Selection of materials and construction technologies, if not carefully chosen, will adversely impact the aesthetic appeal of the destinations	Selection of materials will be according to specification and from approved sources Procurement of all material according to the material specification of the contract document and sourced from licensed and approved sources.	<ul style="list-style-type: none"> <li>List of approved quarry sites and sources of materials</li> <li>Construction Contractor documentation</li> </ul>	Material source sites	Contractor, PIU, DSC	<ul style="list-style-type: none"> <li>Checking of records</li> <li>Visual inspection of sites</li> </ul>	PMU	Under compliance Approval obtained/ or to be obtained from PMU and DSC.
7	Socio cultural resources- Ground disturbance can uncover and damage archaeological and historical remains`	There is not such location anticipated on the project site. In case of chance of finding such location, Consult Archaeological Survey of India (ASI) and/or concerned dept. of Uttarakhand Govt. as applicable to obtain an expert assessment of the archaeological potential of the site	Chance find protocol	All sites	PIU, PMU	Site observation, document checking	Environment Specialist of DSC and Environment Officer of PMU	NR
8	Integration of energy efficiency and energy conservation	The detailed designs for the sub-project components shall ensure that environmental sustainability principles, including energy	Detailed design	-	DSC, PMU	Document checking and site feasibility	PMU	Complied

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**Project:** Supply, Laying, Jointing, Testing and Commissioning of Tubewells at Srinagar

**Package No:** UK/UEAP-WSS-GW/02 and UK/UEAP-WSS-GW/02-01

Sr. No.	Field /Issue	Mitigation Activities and Method	Parameters monitored	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
	programs in design of sub-project components	efficiency, resource recycling, waste minimization, rainwater harvesting etc.						
9	Site clearance activities, including delineation of construction areas	Any removal of vegetation or tree felling shall be done after taking statutory permissions if required. All works shall be carried out such that the damage or disruption of flora other than those identified for cutting is minimum. Only ground cover/shrubs that impinge directly on the permanent works or necessary temporary works shall be removed with prior approval from the Environmental Expert of DSC All areas used for temporary construction operations will be subject to complete restoration to their former condition with appropriate rehabilitation procedures as per the rehabilitation plan	Necessary permission/ NOC	-	DSC, PIU	Document checking	Environment Specialist of DSC and Environment Officer of PMU	Complied
10	Blockage of access in residential area, commercial area and sensitive location like	Contractor will identify such location in the preconstruction stage and prepare plan approved by DSC to minimize inconvenience to the people.	Complain from sensitive receptors	Construction location	PMU/DSC	Observation and checking of design	Environment Specialist of DSC and Environment Officer of PMU	Complied

<b>Project: Water Supply</b> - Construction of low level pump house, installation of raw water and clear water pumping machinery, Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains, Rehabilitation of WTP's Design, Supply, Construction and Commissioning of Infiltration Wells, Construction of Sump and Electrical and Instrumentation works at Srinagar  <b>Project:</b> Supply, Laying, Jointing, Testing and Commissioning of Tubewells at Srinagar  <b>Package No: UK/UEAP-WSS-GW/02 and UK/UEAP-WSS-GW/02-01</b>								
Sr. No.	Field /Issue	Mitigation Activities and Method	Parameters monitored	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
	school, college, hospitals and court							
11	Slope protection near reservoir and intake well	Retaining wall will constructed near reservoir and intake well	Protection work	-	PMU/DSC	Observation and checking of design	Environment Specialist of DSC and Environment Officer of PMU	Complied in design and EMP
<b>Construction phase</b>								
12	Construction Camps - Location, Selection, Design and Layout	Siting of the construction camps, labour camp, and stockpiles shall be as per the guidelines of UEPPCB, ULB, village panchayat and any other applicable guideline to the local site. The contractor will assess the impact of the construction camp and should be acceptable to the PIU/ IA/PMU. Construction camps will be located away from settlements and drainage from and through the camps will not endanger any domestic or public water supply. Construction camps including sanitation facilities must be adequately drained. Sewage management though septic tanks and	Selected location for construction work camps and stockpile area,	Construction camp site	Contractor	Site observation	Environment Specialist of DSC and Environment Officer of PMU	Arranged rented house  All facilities- toilet, drinking water provided as per EMP

**Project: Water Supply** - Construction of low level pump house, installation of raw water and clear water pumping machinery, Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains, Rehabilitation of WTP's Design, Supply, Construction and Commissioning of Infiltration Wells, Construction of Sump and Electrical and Instrumentation works at Srinagar

**Project:** Supply, Laying, Jointing, Testing and Commissioning of Tubewells at Srinagar

**Package No:** UK/UEAP-WSS-GW/02 and UK/UEAP-WSS-GW/02-01

Sr. No.	Field /Issue	Mitigation Activities and Method	Parameters monitored	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
		solid waste management through local ULB system or other alternate measures.						
13	Drinking water availability	Sufficient supply of potable water to be provided and maintained as per the standards, requirements, test methods and sampling procedure according to IS: 10500.	Availability of drinking water	Working and camp site	Contractor	Site observation	Environment Specialist of DSC and Environment Officer of PMU	Provided at working sites and rented houses
14	Waste disposal	Pre-identified disposal location (identified by Contractor in compliance to relevant regulation and approved by DSC) shall be part of Comprehensive Waste Disposal Plan Solid Waste Management Plan. Contractor shall ensure that waste shall not be disposed off near the water course or agricultural land, Orchards and Natural Habitats like Grasslands.	<ul style="list-style-type: none"> <li>Waste Management List</li> <li>Complaints from sensitive receptors</li> </ul>	Project Locations	Contractor	<ul style="list-style-type: none"> <li>Checking of records</li> <li>Visual inspection of sites</li> </ul>	Environment Specialist of DSC and Environment Officer of PMU	Under compliance Utilization of excess earth is being done.
15	Stockpiling of construction materials	Stockpiling of construction materials and excavated earth or silt in case of construction of river bed filtration does not impact obstruct the drainage and Stockpiles will be covered to protect from dust and erosion.	Selected location and facility	Project Locations	Contractor	Site checking	Environment Specialist of DSC and Environment Officer of PMU	Complied
16	Access to Site	Contractors shall ensure that all side drains	<ul style="list-style-type: none"> <li>Involvement</li> </ul>	Specific project	Contractor	Site	Environment Specialist of	Complied

**Project: Water Supply** - Construction of low level pump house, installation of raw water and clear water pumping machinery, Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains, Rehabilitation of WTP's Design, Supply, Construction and Commissioning of Infiltration Wells, Construction of Sump and Electrical and Instrumentation works at Srinagar

**Project:** Supply, Laying, Jointing, Testing and Commissioning of Tubewells at Srinagar

**Package No:** UK/UEAP-WSS-GW/02 and UK/UEAP-WSS-GW/02-01

Sr. No.	Field /Issue	Mitigation Activities and Method	Parameters monitored	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
		and scour check walls on access and haul roads are functioning properly and are well maintained. Contractors shall ensure that access roads are maintained in good condition	of traffic dept. • Road closure planning • Maintenance of road	location		observation	DSC and Environment Officer of PMU	
17	Quarry Operations	Contractor shall finalize the quarry for procurement of construction materials after assessment of the availability of sufficient quantity of materials, quality and other logistic arrangements. The Contractor shall obtain materials from approved quarries only after consent of the Department of Mines and Geology and District Administration.	• List of approved quarry sites and sources of materials • Construction Contractor documentation	Quarries and material source areas	Contractor	Site observation	Environment Specialist of DSC and Environment Officer of PMU	Complied
18	Arrangement for Construction Water	The contractor shall use ground/surface water as a source of water for the construction with the written consent from the concerned Department. The Contractor shall provide a list of locations and type of sources from where water for construction shall be extracted.	Water source locations	Project locations	Contractor	Site observation	Environment Specialist of DSC and Environment Officer of PMU	Arranged in consultation with PIU

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Sr. No.	Field /Issue	Mitigation Activities and Method	Parameters monitored	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
19	Soil/land Erosion	Slope protection measures will be undertaken as per design to control soil erosion. There shall be a periodic checking of the site's drainage system by DSC, PIU/IA and PMU to ensure that the water flow is unobstructed.	Slope protection work	Construction locations	Contractor	Site observation	Environment Specialist of DSC and Environment Officer of PMU	Complied
20	Water Pollution from Construction Wastes	The Contractor shall take all precautionary measures to prevent entering of wastewater into streams, water bodies or the irrigation system during construction. Waste will be disposed of to a suitable waste site in accordance with Hazardous Wastes (Management, Handling and Transboundary movement) Rules, 2008 and amendments till date and applicable norms	<ul style="list-style-type: none"> <li>• Water pollution</li> <li>• Complaint from sensitive receptors</li> </ul>	Project locations	Contractor	Site observation	Environment Specialist of DSC and Environment Officer of PMU	Arranged near water source
21	Water Pollution from Fuel and Lubricants	The Contractor shall ensure that all construction vehicle parking locations, fuel/lubricants storage sites, vehicle, machinery and equipment maintenance and refueling sites shall be located at least 300 m away from rivers/streams and irrigation canal/ponds if any	<ul style="list-style-type: none"> <li>• Water pollution</li> <li>• Complaint from sensitive receptors</li> </ul>	Project locations	Contractor	Site observation	Environment Specialist of DSC and Environment Officer of PMU	Complied

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Sr. No.	Field /Issue	Mitigation Activities and Method	Parameters monitored	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
22	Soil Pollution due to fuel and lubricants, construction waste	The fuel storage and vehicle cleaning area will be stationed such that spillage of fuels and lubricants does not contaminate the ground. All pollution parameters will be monitored as per monitoring plan.	<ul style="list-style-type: none"> <li>Soil pollution-contamination of ground</li> </ul>	Project locations	Contractor	Site observation	Environment Specialist of DSC and Environment Officer of PMU	Complied
23	Generation of dust	The contractor will take every precaution to reduce the levels of dust at construction site. Regular sprinkling of water and Stockpiles of soil will be kept covered in such a manner to minimize dust generation	<ul style="list-style-type: none"> <li>Location of stockpiles</li> <li>Complaints from sensitive receptors</li> <li>Monitoring data</li> <li>Water sprinkling arrangement</li> <li>Cover materials</li> </ul>	Project locations	Contractor	<ul style="list-style-type: none"> <li>Checking of records</li> <li>Visual inspection of sites</li> </ul>	Environment Specialist of DSC and Environment Officer of PMU	<p>Complied</p> <p>Location of stockpiles selected. Covering of materials done</p> <p>Water sprinkling being done.</p> <p>Base line air quality monitoring done and during construction monitoring also done as per EMP</p>

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**Project:** Supply, Laying, Jointing, Testing and Commissioning of Tubewells at Srinagar

**Package No:** UK/UEAP-WSS-GW/02 and UK/UEAP-WSS-GW/02-01

Sr. No.	Field /Issue	Mitigation Activities and Method	Parameters monitored	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
24	Emission from Construction Vehicles, Equipment and Machinery	All vehicles, equipment and machinery used for construction shall confirm to the relevant Bureau of India Standard (BIS) norms. The discharge standards promulgated under the Environment Protection Act, 1986 shall be strictly adhered to. The use of silent/quiet equipment compliant with India ambient noise standards and standards specified for manufacturers shall be encouraged in the sub Project. The Contractor shall maintain a record of PUC for all vehicles and machinery used during the contract period which shall be produced for verification whenever required.	<ul style="list-style-type: none"> <li>Heavy equipment and machinery with air pollution control</li> <li>Availability of PUC certificate</li> </ul>	Project locations	Contractor	<ul style="list-style-type: none"> <li>Checking of records</li> <li>Visual inspection of sites</li> </ul>	Environment Specialist of DSC and Environment Officer of PMU	PUC certificate submitted
25	Noise Pollution	The Contractor shall confirm that all Construction equipment used in construction shall strictly conform to the MoEF/CPCB noise standards and all Vehicles and equipment used in construction shall be fitted with exhaust silencers. At the construction sites noisy construction work such as crushing, operation of DG sets,	<ul style="list-style-type: none"> <li>Complaints from sensitive receptors</li> <li>Use of silencers in noise-producing equipment and sound</li> </ul>	Project Locations	Contractor	<ul style="list-style-type: none"> <li>Checking of records</li> <li>Visual inspection of sites</li> </ul>	Environment Specialist of DSC and Environment Officer of PMU	Complied  No such noise producing machinery mobilized at site  PPE are in use

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Sr. No.	Field /Issue	Mitigation Activities and Method	Parameters monitored	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
		use of high noise generation equipment shall be stopped during the night time between 10.00 pm to 6.00 am. Noise limits for construction equipment used in this project will be in conformity to the BIS/SPCB/CPCB standards Regular monitoring of ambient noise levels to ensure compliance to Uttarakhand Environment Protection & Pollution Control Board standards.	barriers • Monitoring data					Base line monitoring done.  During construction monitoring also done
26	Material Handling at Site	Workers Employed on mixing cement, lime mortars, concrete etc., will be provided with protective footwear and protective masks and goggles. Workers, who are engaged in welding works, will be provided with welder's protective eye-shields. Workers engaged in stone breaking activities will be provided with protective goggles, masks, and clothing. All concrete mixing must take place on a designated, impermeable surface.	Available protective equipments	Project Locations	Contractor	Site observation	Environment Specialist of DSC and Environment Officer of PMU	Partially complied. Instruction given to contractor for full compliance

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Sr. No.	Field /Issue	Mitigation Activities and Method	Parameters monitored	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
27	Damage, and disturbance to other infrastructure in the construction site	Confirm location of infrastructure. Finalize alignment in coordination with agencies like Uttarakhand Power Corporation Limited, Bharat Sanchar Nigam Limited, etc. Ensure prior permission of respective agency Realign pipelines, if required and subsequently revise IEE Provide public information in case of service disruptions	List of affected utilities / infrastructure if any and operators	Specific project location	Contractor	Observation and document checking	Environment Specialist of DSC and Environment Officer of PMU	Not required now.
28	Disposal of Construction Waste / Debris / Cut Material	The Contractor shall confirm that Safe disposal of the construction waste will be ensured in the pre-identified disposal locations. In no case, any construction waste will be disposed around the project site indiscriminately.	<ul style="list-style-type: none"> <li>Waste Management List</li> <li>Complaints from sensitive receptors</li> </ul>	Project Locations	Contractor	Site observation	Environment Specialist of DSC and Environment Officer of PMU	Complied Utilization of excess earth and demolish waste done
29	Disruption / cessation of existing water supply systems due to construction activity.	Care to be taken during improvement of existing water supply systems, so that disruption in existing water supply would not occur. Tentative schedule of closure should be known to affected people prior to cessation of water supply.	<ul style="list-style-type: none"> <li>Schedule of closure</li> </ul>	Project site	Contractor, PIU	Checking of records Visual observation	Environment Specialist of DSC and Environment Officer of PMU	Not required as per present nature of work

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Sr. No.	Field /Issue	Mitigation Activities and Method	Parameters monitored	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
		In case disruption of water supply exceeds the intimated schedule, arrangement for supply of potable water should be made.						
30	Safety Measures During Construction	<p>Personal Protective Equipment for workers on the project and adequate safety measures for workers during handling of materials at site will be taken up. The contractor has to comply with all regulations regarding safe scaffolding, ladders, working platforms, gangway, stairwells, excavations, trenches and safe means of entry and egress.</p> <p>The contractor has to comply with all regulations for the safety of workers. Precaution will be taken to prevent danger of the workers from fire, etc. First aid treatment will be made available for all injuries likely to be sustained during the course of work. Contractor shall also organize periodic visits by a qualified registered medical practitioner to the site and workers camp. Contact information of Doctor, availability &amp; location of first aid box shall be displayed in appropriate</p>	<ul style="list-style-type: none"> <li>• Site-specific Health and Safety (H&amp;S) Plan</li> <li>• Equipped first-aid stations;</li> <li>• Medical insurance coverage for workers</li> <li>• Supplies of potable drinking water;</li> <li>• Record of H&amp;S orientation trainings</li> <li>• Personal protective equipments</li> </ul>	Project Locations	Contractor	Document check and visual observation	Environment Specialist of DSC and Environment Officer of PMU	<p>PPE used by contractor</p> <p>First aid box available at all working ocatons</p> <p>Safety tape / barricade provided at all excavated sites</p> <p>Signages present</p> <p>Overall complied</p>

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Sr. No.	Field /Issue	Mitigation Activities and Method	Parameters monitored	Location	Responsible for Mitigation	Monitoring Method	Responsible for Monitoring	Compliance Status/ Explanation
		language both at work site and workers camp. The Contractor will also ensure that the interests of the community are preferably not disturbed, and if unavoidable then disturbed to the minimum. Provide traffic management personnel, barricade, appropriate signage and safety information in and around the construction site and prevent local people entering into the construction site.	<ul style="list-style-type: none"> <li>• Sign boards for comply public safety</li> <li>• Complaints from sensitive receptors</li> <li>• Number of signages placed at subproject location</li> </ul>					
31	Clearing of Construction Camps and Restoration	Contractor to prepare site restoration plans for approval by the Engineer. The plan is to be implemented by the contractor prior to demobilization.	Site restoration plan	Project Locations	Contractor	Site observation	Environment Specialist of DSC and Environment Officer of PMU	Not required , workers living in rented houses
32	Risk of archaeological chance finds	Strictly follow the protocol for chance finds in any excavation work; Request FPIU/DSC or any authorized person with archaeological field training to observe excavation; Stop work immediately to allow further investigation if any finds are suspected; and	Chance find protocol	Project Locations	Contractor	Checking of record	Environment Specialist of DSC and Environment Officer of PMU	Not required

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		Inform FPIU/DSC, and take any action they require ensuring its removal or protection in situ.						
33	Conflict with locals	Contractor shall ensure that mostly the local labourers are employed and migratory laborer shall be employed only in case of unavoidable circumstances.	Employment record	Project Locations	Contractor	Checking of records	Environment Specialist of DSC and Environment Officer of PMU	Complied  Local labours are employed
34	Environment Safeguard Officer	Contractor shall appoint one full-time suitably qualified and experienced Environment and Safety Officer who shall be responsible for assisting contractor in implementation of EMP, community liaisoning, consultations with interested/affected parties, reporting and grievance redressal on day-to-day basis. This environment and safety officer will be at site till all works related to the project including demobilization are completed.	Available Environment and safety officer	Project site/ Office	Contractor	Observation, checking of presence and activity	Environment Specialist of DSC and Environment Officer of PMU	Complied

### ANNEXURE 3: ENVIRONMENT PERFORMANCE FACT SHEET

ANNEXURE C: ENVIRONMENTAL & SOCIAL SAFEGUARD OFFICER'S REPORT																	
S.No.	Sub project Code	Name of Sub Project	Name of Contractor	EMP Part of contract Document (Yes / No)	EMP being Implemented (Yes / No)	Overall Status of EMP Implementation (Excellent, Satisfactory, Partially Satisfactory, Below Satisfactory)	Environmental Consents / Clearances Required						Nomination of Environmental & Social Safeguard Officer by Contractor (Nominated / Yet to be Nominated)	Dust Control (Excellent, Satisfactory, Partially Satisfactory, Below Satisfaction)	Labour Camp Management (Excellent, Satisfactory, Partially Satisfactory, Below Satisfaction)	Workers Safety Measures (Excellent, Satisfactory, Partially Satisfactory, Below Satisfaction)	Traffic Safety Measures (Excellent, Satisfactory, Partially Satisfactory, Below Satisfaction)
							Tree cutting	Crusher	Batching Plant	Hot Mix Plant	Diesel Generator set	PUC for Contractor's Vehicles					
UEAP Water supply sub Project																	
1	(UK/UEAP-WSS-KU/01 Lot 1) Kapkot	Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc. at Kapkot, Bageshwar & Dharchula	Kasmirilal Construction Pvt. Ltd.	Yes	Yes	Satisfactory	NR	NR	NR	NR	NR	Submitted	Nominated	Satisfactory	Rented house arranged	Satisfactory.	Not required now

2	(UK/UEAP-WSS- KU/01 Lot 2) Bageshwar	Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc. at Kapkot, Bageshwar & Dharchula	Kasmirial Construction Pvt. Ltd.	Yes	Yes	Satisfactory	NR	NR	NR	NR	NR	Submitted	Nominated	Satisfactory	Rented house arranged	Satisfactory	Not required now
3	(UK/UEAP-WSS- KU/01 Lot 3) Dharchula	Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc. at Kapkot, Bageshwar & Dharchula	Kasmirial Construction Pvt. Ltd.	Yes	Yes	Satisfactory	NR	NR	NR	NR	NR	Submitted	Nominated	Satisfactory	Rented house arranged	Satisfactory	Not required now
4	(UK/UEAP-WSS- GW/01- Lot 1) Rudraprayag	Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc.	R. K. Engineers Sales Ltd.	Yes	Yes.	Satisfactory	NR	NR	NR	NR	NR	Submitted	Nominated	Satisfactory	Rented house arranged	Satisfactory	Not required now
5	(UK/UEAP-WSS- GW/01- Lot 2) Karnprayag	Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc.	R. K. Engineers Sales Ltd.	Yes	Yes.	Satisfactory	NR	NR	NR	NR	NR	Submitted	Nominated	Satisfactory	Rented house arranged	Satisfactory.	Not required now
6	(UK/UEAP-WSS- GW/01- Lot 3) Gauchar	Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc. (	R. K. Engineers Sales Ltd.	Yes	Yes.	Satisfactory -	NR	NR	NR	NR	NR	Submitted	Nominated	Satisfactory	Rented house arranged	Satisfactory -	Not required now

7	(UK/UEAP-WSS-GW/01- Lot 4) Uttarkashi	Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc.	R. K. Engineers Sales Ltd.	Yes	Yes.	Satisfactory	NR	NR	NR	NR	NR	Submitted	Nominated	Satisfactory	Rented house arranged	Satisfactory	Not required now
8	(UK/UEAP-WSS-GW/01- Lot 5) Deprayag	Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains and Design, Supply, Construction and Commissioning of Infiltration Wells, WTP, GLSR etc.		Yes	No	Satisfactory	Tree cutting work under process	NR	NR	NR	NR	Submitted	Nominated	Satisfactory	Rented house arranged	Satisfactory	Not required now
9	UK/UEAP-WSS-GW/02) Srinagar	Construction of low level pump house, installation of raw water and clear water pumping machinery, Supply, Laying, Jointing, Testing and Commissioning of Water Transmission Mains, Rehabilitation of WTP's Design, Supply, Construction and Commissioning of Infiltration Wells, Construction of Sump and Electrical and Instrumentation works (	R. K. Engineers Sales Ltd.	Yes	Yes	Satisfactory	NR	NR	NR	NR	NR	Submitted	Nominated	Satisfactory	Rented house arranged	Satisfactory	Not required now
10	UK/UEAP-WSS-GW/02-01) Srinagar	Design and Construction of Tube Wells bore well, performance (yield) test, design, supply and installation of Mechanical equipment to suit yield test results (single stage pumping), testing, commissioning, laying of required lengths of pipe line up to termination / destination points, as per site requirements, Construction of Pump houses, chamber, Construction of Boundary Walls, operation and maintenance of tube wells for a period of 1 year and allied works in Srinagar	Uttaranchal Tubewell Construction	Yes	Yes	Satisfactory	NR	NR	NR	NR	NR	Submitted	Nominated	Satisfactory	Rented house arranged	Satisfactory	Not required now

**ANNEXURE 4: Public Consultations done during (July to December, 2016)**

**DURING CONSTRUCTION/ IMPLEMENTATION**

<b>Sr</b>	<b>Location</b>	<b>Pkg No</b>	<b>Date of consultation in construction phase during the reporting period</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>5</b>
1	<b>Kapkot</b>	UK/UEAP-WSS-KU/01- Lot 1	23-12-2016
2	<b>Bageshwar</b>	UK/UEAP-WSS-KU/01- Lot 2	23-12-2016
3	<b>Dharchula</b>	UK/UEAP-WSS-KU/01- Lot 3	29-11.2016 & 25-12-2016
4	<b>Rudraprayag</b>	UK/UEAP-WSS-GW/01- Lot 1	17-09-16
5	<b>Karanprayag</b>	UK/UEAP-WSS-GW/01- Lot 2	19-09-2016
6	<b>Gauchar</b>	UK/UEAP-WSS-GW/01- Lot 3	18-09-2016
7	<b>Uttarkashi</b>	UK/UEAP-WSS-GW/01- Lot 4	24-09-2016
8	<b>Devprayag</b>	UK/UEAP-WSS-GW/01- Lot 5	16-11-2016
9	<b>Srinagar</b>	UK/UEAP-WSS-GW/02	18-11-2016

## Annexure 5: Grievance Redressal Cell

**परियोजना प्रबन्धन ईकाई**  
**उत्तराखण्ड डिजास्टर रिकवरी प्रोजेक्ट एवं**  
**उत्तराखण्ड ईमरजेन्सी असिस्टेंस प्रोजेक्ट**  
**सिडकुल बिल्डिंग 29 आई.आई.ई. (आई.टी. पार्क) सहरादून रोड**  
**देहरादून-248001 उत्तराखण्ड**

आपदा राहत एवं पुनर्वास के अन्तर्गत आवास, सड़क, पुल दुर्गम क्षेत्रों के लिये हैलीपैड, चिह्नित क्षतिग्रस्त सरकारी भवनों, पर्यटन विभाग की परिसम्पत्तियों, बहुउद्देशीय भवनों एवं एफ.आर.पी. हट्स बनाये जा रहे हैं। उपरोक्त से संबंधित किसी भी समस्या के निवारण के लिये परियोजना प्रबन्धन ईकाई एवं जनपद स्तर पर समस्या निवारण प्रकोष्ठ गठित किये गये हैं, जिनके संपर्क सूत्र निम्नवत हैं- इन संपर्क सूत्रों पर कार्यालय दिवसों एवं कार्यालय समयावधि में संपर्क किया जा सकता है।

केन्द्रीय समस्या निवारण प्रकोष्ठ दूरभाष संख्या 0135-2708376,  
 परियोजना प्रबन्धन ईकाई देहरादून ई मेल-grievancepmu@gmail.com

जनपद	नोडल अधिकारी	दूरभाष संख्या
रुद्रप्रयाग	श्री आशीष सेमवाल / राहुल जीयल	8859504022 / 8859504026
चमोली	श्री नन्द किशोर जोशी	9411352136
उत्तरकाशी	श्री देवेन्द्र पटवाल	9410350338
बागेश्वर	कु. रिया समूरी	8193917518
पिथौरागढ़	श्री आर. एच. राणा	9412079945
अल्मोडा	श्री राकेश जोशी	9412929707
चम्पावत	श्री मनोज पाण्डे	9412347265
नैनीताल	श्री शैलेश कुमार	9456523808
उद्यमसिंह नगर	श्री अनिल शर्मा	7417170470
टिहरी	श्री ब्रिजेश भट्ट	—
हरिद्वार	—	—
देहरादून	सुश्री दीपशिखा रावत	9412964936, 0135-2710334
पौड़ी	श्री हबिबुर रहमान	9412031195

## ANNEXURE 6: Sample Grievance Registration Form

(To be available in Hindi and English or local language, if any)

The **Uttarakhand Emergency Assistance Project (UEAP)** welcomes complaints, suggestions, queries and comments regarding project implementation. We encourage persons with grievance to provide their name and contact information to enable us to get in touch with you for clarification and feedback.

Should you choose to include your personal details but want that information to remain confidential, please inform us by writing/typing **\*(CONFIDENTIAL)\*** above your name. Thank you.

<b>Date</b>		<b>Place of registration</b>			
<b>Contact Information/Personal Details</b>					
<b>Name</b>		<b>Gender</b>	<b>Male</b> <b>Female</b>	<b>Age</b>	
<b>Home Address</b>					
<b>Village / Town</b>					
<b>District</b>					
<b>Phone no.</b>					
<b>E-mail</b>					
<b>Complaint/Suggestion/Comment/Question Please provide the details (who, what, where and how) of your grievance below:</b> <b>If included as attachment/note/letter, please tick here:</b>					
<b>How do you want us to reach you for feedback or update on your comment/grievance?</b>					

### FOR OFFICIAL USE ONLY

<b>Registered by: (Name of official registering grievance)</b>	
<b>If – then mode:</b> <ul style="list-style-type: none"> <li>• Note/Letter</li> <li>• E-mail</li> <li>• Verbal/Telephonic</li> </ul>	
<b>Reviewed by: (Names/Positions of Official(s) reviewing grievance)</b>	
<b>Action Taken:</b>	
<b>Whether Action Taken Disclosed:</b>	<ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> </ul>
<b>Means of Disclosure:</b>	

### GRIVENCES RECORD AND ACTION TAKEN

Sr. No.	Date	Name and Contact No. of Complainer	Type of Complain	Place	Status of Redress	Remarks

## परिशिष्ट 7: नमूना शिकायत पंजीकरण फार्म

(हिंदी, उर्दू और अंग्रेजी या स्थानीय भाषा में उपलब्ध हो, यदि कोई हो, )

UEAP शिकायतें, सुझाव, प्रश्नों और परियोजना के कार्यान्वयन के बारे में टिप्पणियों का स्वागत करता है। हम लोगों को शिकायत के साथ उनके नाम और संपर्क जानकारी प्रदान करने के लिए प्रोत्साहित करते हैं ताकि हम स्पष्टीकरण और प्रतिक्रिया के लिए आप के साथ संपर्क कर सकें।

आपको अपने व्यक्तिगत विवरण शामिल करने चाहिए लेकिन उस जानकारी को गोपनीय रखा जायगा। आपका नाम ऊपर (गोपनीय) \* लेखन / टाइपिंग द्वारा हमें सूचित करें धन्यवाद

तारीख			पंजीकरण का स्थान		
संपर्क करने संबंधी जानकारी / व्यक्तिगत विवरण					
नाम		लिंग	पुरुष महिला	आयु	
घर का पता					
गांव / शहर					
जनपद					
फोन नं.					
ई मेल					
शिकायत / सुझाव / टिप्पणी / प्रश्न नीचे अपनी शिकायत का विवरण (जो, क्या, कहां और कैसे) प्रदान करें:					
सलगनक / नोट / पत्र के रूप में, शामिल हैं, कृपया यहाँ टिक करें					
हम आप तक प्रतिक्रिया के लिए कैसे पहुँच संकते हैं या अपनी टिप्पणी / शिकायत पर नवीनीकरण?					

केवल कार्यालय उपयोग के लिए

द्वारा पंजीकृत: (सरकारी पंजीकरण शिकायत का नाम)						
यदि -फिर विधि:						
<ul style="list-style-type: none"> <li>• नोट / पत्र</li> <li>• ई मेल</li> <li>• मौखिक / टेलीफोन</li> </ul>						
से समीक्षित: (नाम / अधिकारी की पोजिशन समीक्षा शिकायत)						
की गई कार्रवाई:						
की गई कार्रवाई का खुलासा:			<ul style="list-style-type: none"> <li>• हाँ</li> <li>• नहीं</li> </ul>			
प्रकटीकरण का मतलब:						
शिकायत रिकॉर्ड और की गई कार्रवाई क्रम संख्या	तारीख	नाम और complainer का संपर्क नंबर	शिकायत के प्रकार	जगह	निवारण की स्थिति	टिप्पणियाँ

## Annexure – 8

## National ambient air quality Standards (2009)

[ भाग III – खण्ड 4 ]

भारत का संविधान : अनुसूची 4

3

## NATIONAL AMBIENT AIR QUALITY STANDARDS

## CENTRAL POLLUTION CONTROL BOARD

## NOTIFICATION

New Delhi, the 18th November, 2009

No. B-29016/20/90/PCI-I.—In exercise of the powers conferred by Sub-section (2) (h) of section 16 of the Air (Prevention and Control of Pollution) Act, 1981 (Act No.14 of 1981), and in supersession of the Notification No(s). S.O. 384(E), dated 11<sup>th</sup> April, 1994 and S.O. 935(E), dated 14<sup>th</sup> October, 1998, the Central Pollution Control Board hereby notify the National Ambient Air Quality Standards with immediate effect, namely:-

## NATIONAL AMBIENT AIR QUALITY STANDARDS

S. No.	Pollutant	Time Weighted Average	Concentration in Ambient Air		
			Industrial, Residential, Rural and Other Area	Ecologically Sensitive Area (notified by Central Government)	Methods of Measurement
(1)	(2)	(3)	(4)	(5)	(6)
1	Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	Annual* 24 hours**	50 80	20 80	- Improved West and Gaeke - Ultraviolet fluorescence
2	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	Annual* 24 hours**	40 80	30 80	- Modified Jacob & Hochheiser (Na-Arsenite) - Chemiluminescence
3	Particulate Matter (size less than 10µm) or PM <sub>10</sub> µg/m <sup>3</sup>	Annual* 24 hours**	60 100	60 100	- Gravimetric - TOEM - Beta attenuation
4	Particulate Matter (size less than 2.5µm) or PM <sub>2.5</sub> µg/m <sup>3</sup>	Annual* 24 hours**	40 60	40 60	- Gravimetric - TOEM - Beta attenuation
5	Ozone (O <sub>3</sub> ) µg/m <sup>3</sup>	8 hours** 1 hour**	100 180	100 180	- UV photometric - Chemiluminescence - Chemical Method
6	Lead (Pb) µg/m <sup>3</sup>	Annual* 24 hours**	0.50 1.0	0.50 1.0	- AAS /ICP method after sampling on EPM 2000 or equivalent filter paper - ED-XRF using Teflon filter
7	Carbon Monoxide (CO) mg/m <sup>3</sup>	8 hours** 1 hour**	02 04	02 04	- Non Dispersive Infra Red (NDIR) spectroscopy
8	Ammonia (NH <sub>3</sub> ) µg/m <sup>3</sup>	Annual* 24 hours**	100 400	100 400	- Chemiluminescence - Indophenol blue method

4 THE GAZETTE OF INDIA : EXTRAORDINARY [PART III—Sec. 4]

(1)	(2)	(3)	(4)	(5)	(6)
9	Benzene (C <sub>6</sub> H <sub>6</sub> ) µg/m <sup>3</sup>	Annual*	05	05	- Gas chromatography based continuous analyzer - Adsorption and Desorption followed by GC analysis
10	Benzo[ <i>a</i> ]Pyrene (BaP) - particulate phase only, ng/m <sup>3</sup>	Annual*	01	01	- Solvent extraction followed by HPLC/GC analysis
11	Arsenic (As), ng/m <sup>3</sup>	Annual*	06	06	- AAS/ICP method after sampling on EPM 2000 or equivalent filter paper
12	Nickel (Ni), ng/m <sup>3</sup>	Annual*	20	20	- AAS/ICP method after sampling on EPM 2000 or equivalent filter paper

\* Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

\*\* 24 hourly or 08 hourly or 01 hourly monitored values, as applicable, shall be complied with 98% of the time in a year. 2% of the time, they may exceed the limits but not on two consecutive days of monitoring.

Note. — Whenever and wherever monitoring results on two consecutive days of monitoring exceed the limits specified above for the respective category, it shall be considered adequate reason to institute regular or continuous monitoring and further investigation.

SANT PRASAD GAUTAM, Chairman  
[ADWT-III/4/184/09/Ext.]

Note: The notifications on National Ambient Air Quality Standards were published by the Central Pollution Control Board in the Gazette of India, Extraordinary vide notification No(s). S.O. 334(E), dated 11<sup>th</sup> April, 1994 and S.O. 935(E), dated 14<sup>th</sup> October, 1998.

## Annexure -9

### INLAND SURFACE WATER CATEGORIES (CPCB,1978)

The Central Pollution Control Board has classified the inland Surface water into five categories A to E. On the basis of there designated best use and the desired class. The principal concern has been the end use to which man may put to water. The classification has been made in such a manner that with the degradation in quality, the water quality requirement becomes progressively lower from A to E. The CPCB classification of the inland surface water is give as under: -

Designated Best Use	Class of Water	Criteria
Drinking water Source without Conventional treatment but after disinfections.	A	1. Total coliform organisms MPN/100 ml shall be 50(max.) 2. pH between 6.5 to 8.5 3. Dissolved Oxygen (Min) 6 mg/l 4. BOD (max) 5 days < 2.00 mg/l
Outdoor bathing(Organised)	B	1. Total coliform organisms MPN/100 ml shall be 500 (max.) 2. Fecal Coliform MPN/100 mg. to be 2500 (max.) for Ganga Action Plan. 3. pH between 6.8 to 8.5. 4. Dissolved Oxygen (min) 4 mg/l 5. BOD (Max.) 5 days @ 3 mg/l
Drinking water with conventional treatment Followed by disinfections	C	1. Total coliform organisms MPN/100 ml shall be 5000 (max.) 2. pH between 6.8 to 3. Dissolved Oxygen (min) 4 mg/l 4. BOD (max.) 5 days @ 3 mg/l
Propagation of wild life Fisheries.	D	1. pH between 6.5 to 8.5 2. Dissolved Oxygen (min) 4 mg/l. 3. Free Ammonia (as N) (max) 1.2mg/l.
Irrigation, industrial cooling, and Controlled disposal	E	1. pH between 6.0 and 8.5 2. Electrical conductivity less than 2250 micro mhos/cm, 3. Sodium Absorption Ratio less than 26, and Boron less than 2 mg/l

## Annexure-10

### Drinking water standards – (IS 10500: 2012 )

<b>Table 1 Organoleptic and Physical Parameters</b> <i>(Foreword and Clause 4)</i>					
Sl No.	Characteristic	Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source	Method of Test, Ref to Part of IS 3025	Remarks
(1)	(2)	(3)	(4)	(5)	(6)
i)	Colour, Hazen units, <i>Max</i>	5	15	Part 4	Extended to 15 only, if toxic substances are not suspected in absence of alternate sources
ii)	Odour	Agreeable	Agreeable	Part 5	a) Test cold and when heated b) Test at several dilutions
iii)	pH value	6.5-8.5	No relaxation	Part 11	—
iv)	Taste	Agreeable	Agreeable	Parts 7 and 8	Test to be conducted only after safety has been established
v)	Turbidity, NTU, <i>Max</i>	1	5	Part 10	—
vi)	Total dissolved solids, mg/l, <i>Max</i>	500	2 000	Part 16	—
NOTE — It is recommended that the acceptable limit is to be implemented. Values in excess of those mentioned under 'acceptable' render the water not suitable, but still may be tolerated in the absence of an alternative source but up to the limits indicated under 'permissible limit in the absence of alternate source' in col 4, above which the sources will have to be rejected.					

## IS 10500 : 2012

**Table 2 General Parameters Concerning Substances Undesirable in Excessive Amounts**  
(Foreword and Clause 4)

SI No.	Characteristic	Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source	Method of Test, Ref to	Remarks
(1)	(2)	(3)	(4)	(5)	(6)
i)	Aluminium (as Al), mg/l, <i>Max</i>	0.03	0.2	IS 3025 (Part 55)	—
ii)	Ammonia (as total ammonia-N), mg/l, <i>Max</i>	0.5	No relaxation	IS 3025 (Part 34)	—
iii)	Anionic detergents (as MBAS) mg/l, <i>Max</i>	0.2	1.0	Annex K of IS 13428	—
iv)	Barium (as Ba), mg/l, <i>Max</i>	0.7	No relaxation	Annex F of IS 13428* or IS 15302	—
v)	Boron (as B), mg/l, <i>Max</i>	0.5	1.0	IS 3025 (Part 57)	—
vi)	Calcium (as Ca), mg/l, <i>Max</i>	75	200	IS 3025 (Part 40)	—
vii)	Chloramines (as Cl <sub>2</sub> ), mg/l, <i>Max</i>	4.0	No relaxation	IS 3025 (Part 26)* or APHA 4500-Cl G	—
viii)	Chloride (as Cl), mg/l, <i>Max</i>	250	1 000	IS 3025 (Part 32)	—
ix)	Copper (as Cu), mg/l, <i>Max</i>	0.05	1.5	IS 3025 (Part 42)	—
x)	Fluoride (as F) mg/l, <i>Max</i>	1.0	1.5	IS 3025 (Part 60)	—
xi)	Free residual chlorine, mg/l, <i>Min</i>	0.2	1	IS 3025 (Part 26)	To be applicable only when water is chlorinated. Tested at consumer end. When pro- tection against viral infec- tion is required, it should be minimum 0.5 mg/l
xii)	Iron (as Fe), mg/l, <i>Max</i>	0.3	No relaxation	IS 3025 (Part 53)	Total concentration of man- ganese (as Mn) and iron (as Fe) shall not exceed 0.3 mg/l
xiii)	Magnesium (as Mg), mg/l, <i>Max</i>	30	100	IS 3025 (Part 46)	—
xiv)	Manganese (as Mn), mg/l, <i>Max</i>	0.1	0.3	IS 3025 (Part 59)	Total concentration of man- ganese (as Mn) and iron (as Fe) shall not exceed 0.3 mg/l
xv)	Mineral oil, mg/l, <i>Max</i>	0.5	No relaxation	Clause 6 of IS 3025 (Part 39) Infrared partition method	—
xvi)	Nitrate (as NO <sub>3</sub> ), mg/l, <i>Max</i>	45	No relaxation	IS 3025 (Part 34)	—
xvii)	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l, <i>Max</i>	0.001	0.002	IS 3025 (Part 43)	—
xviii)	Selenium (as Se), mg/l, <i>Max</i>	0.01	No relaxation	IS 3025 (Part 56) or IS 15303*	—
xix)	Silver (as Ag), mg/l, <i>Max</i>	0.1	No relaxation	Annex J of IS 13428	—
xx)	Sulphate (as SO <sub>4</sub> ) mg/l, <i>Max</i>	200	400	IS 3025 (Part 24)	May be extended to 400 pro- vided that Magnesium does not exceed 30
xxi)	Sulphide (as H <sub>2</sub> S), mg/l, <i>Max</i>	0.05	No relaxation	IS 3025 (Part 29)	—
xxii)	Total alkalinity as calcium carbonate, mg/l, <i>Max</i>	200	600	IS 3025 (Part 23)	—
xxiii)	Total hardness (as CaCO <sub>3</sub> ), mg/l, <i>Max</i>	200	600	IS 3025 (Part 21)	—
xxiv)	Zinc (as Zn), mg/l, <i>Max</i>	5	15	IS 3025 (Part 49)	—

## NOTES

1 In case of dispute, the method indicated by '\*' shall be the referee method.

2 It is recommended that the acceptable limit is to be implemented. Values in excess of those mentioned under 'acceptable' render the water not suitable, but still may be tolerated in the absence of an alternative source but up to the limits indicated under 'permissible limit in the absence of alternate source' in col 4, above which the sources will have to be rejected.

IS 10500 : 2012

**Table 3 Parameters Concerning Toxic Substances**  
(Foreword and Clause 4)

SI No.	Characteristic	Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source	Method of Test, Ref to	Remarks
(1)	(2)	(3)	(4)	(5)	(6)
i)	Cadmium (as Cd), mg/l, <i>Max</i>	0.003	No relaxation	IS 3025 (Part 41)	—
ii)	Cyanide (as CN), mg/l, <i>Max</i>	0.05	No relaxation	IS 3025 (Part 27)	—
iii)	Lead (as Pb), mg/l, <i>Max</i>	0.01	No relaxation	IS 3025 (Part 47)	—
iv)	Mercury (as Hg), mg/l, <i>Max</i>	0.001	No relaxation	IS 3025 (Part 48)/ Mercury analyser	—
v)	Molybdenum (as Mo), mg/l, <i>Max</i>	0.07	No relaxation	IS 3025 (Part 2)	—
vi)	Nickel (as Ni), mg/l, <i>Max</i>	0.02	No relaxation	IS 3025 (Part 54)	—
vii)	Pesticides, µg/l, <i>Max</i>	See Table 5	No relaxation	See Table 5	—
viii)	Polychlorinated biphenyls, mg/l, <i>Max</i>	0.000 5	No relaxation	ASTM 5175*	—
ix)	Polynuclear aromatic hydrocarbons (as PAH), mg/l, <i>Max</i>	0.000 1	No relaxation	APHA 6440	or APHA 6630 —
x)	Total arsenic (as As), mg/l, <i>Max</i>	0.01	0.05	IS 3025 (Part 37)	—
xi)	Total chromium (as Cr), mg/l, <i>Max</i>	0.05	No relaxation	IS 3025 (Part 52)	—
xii)	Trihalomethanes:				
a)	Bromoform, mg/l, <i>Max</i>	0.1	No relaxation	ASTM D 3973-85* or APHA 6232	—
b)	Dibromochloromethane, mg/l, <i>Max</i>	0.1	No relaxation	ASTM D 3973-85* or APHA 6232	—
c)	Bromodichloromethane, mg/l, <i>Max</i>	0.06	No relaxation	ASTM D 3973-85* or APHA 6232	—
d)	Chloroform, mg/l, <i>Max</i>	0.2	No relaxation	ASTM D 3973-85* or APHA 6232	—

#### NOTES

1 In case of dispute, the method indicated by '\*' shall be the referee method.

2 It is recommended that the acceptable limit is to be implemented. Values in excess of those mentioned under 'acceptable' render the water not suitable, but still may be tolerated in the absence of an alternative source but up to the limits indicated under 'permissible limit in the absence of alternate source' in col 4, above which the sources will have to be rejected.

**Table 4 Parameters Concerning Radioactive Substances**  
(Foreword and Clause 4)

SI No.	Characteristic	Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source	Method of Test, Ref to Part of IS 14194	Remarks
(1)	(2)	(3)	(4)	(5)	(6)
i)	Radioactive materials:				
a)	Alpha emitters Bq/l, <i>Max</i>	0.1	No relaxation	Part 2	—
b)	Beta emitters Bq/l, <i>Max</i>	1.0	No relaxation	Part 1	—

NOTE — It is recommended that the acceptable limit is to be implemented. Values in excess of those mentioned under 'acceptable' render the water not suitable, but still may be tolerated in the absence of an alternative source but up to the limits indicated under 'permissible limit in the absence of alternate source' in col 4, above which the sources will have to be rejected.

IS 10500 : 2012

**Table 5 Pesticide Residues Limits and Test Method**  
(Foreword and Table 3)

SI No.	Pesticide	Limit µg/l	Method of Test, Ref to	
			USEPA (4)	AOAC/ ISO (5)
(1)	(2)	(3)		
i)	Alachlor	20	525.2, 507	—
ii)	Atrazine	2	525.2, 8141 A	—
iii)	Aldrin/ Dieldrin	0.03	508	—
iv)	Alpha HCH	0.01	508	—
v)	Beta HCH	0.04	508	—
vi)	Butachlor	125	525.2, 8141 A	—
vii)	Chlorpyrifos	30	525.2, 8141 A	—
viii)	Delta HCH	0.04	508	—
ix)	2,4- Dichlorophenoxyacetic acid	30	515.1	—
x)	DDT (o, p and p, p – Isomers of DDT, DDE and DDD)	1	508	AOAC 990.06
xi)	Endosulfan (alpha, beta, and sulphate)	0.4	508	AOAC 990.06
xii)	Ethion	3	1657 A	—
xiii)	Gamma — HCH (Lindane)	2	508	AOAC 990.06
xiv)	Isoproturon	9	532	—
xv)	Malathion	190	8141 A	—
xvi)	Methyl parathion	0.3	8141 A	ISO 10695
xvii)	Monocrotophos	1	8141 A	—
xviii)	Phorate	2	8141 A	—

NOTE — Test methods are for guidance and reference for testing laboratory. In case of two methods, USEPA method shall be the reference method.

**Table 6 Bacteriological Quality of Drinking Water<sup>1)</sup>**  
(Clause 4.1.1)

SI No.	Organisms	Requirements
(1)	(2)	(3)
i)	All water intended for drinking:	
a)	<i>E. coli</i> or thermotolerant coliform bacteria <sup>2), 3)</sup>	Shall not be detectable in any 100 ml sample
ii)	Treated water entering the distribution system:	
a)	<i>E. coli</i> or thermotolerant coliform bacteria <sup>2)</sup>	Shall not be detectable in any 100 ml sample
b)	Total coliform bacteria	Shall not be detectable in any 100 ml sample
iii)	Treated water in the distribution system:	
a)	<i>E. coli</i> or thermotolerant coliform bacteria	Shall not be detectable in any 100 ml sample
b)	Total coliform bacteria	Shall not be detectable in any 100 ml sample

<sup>1)</sup>Immediate investigative action shall be taken if either *E.coli* or total coliform bacteria are detected. The minimum action in the case of total coliform bacteria is repeat sampling; if these bacteria are detected in the repeat sample, the cause shall be determined by immediate further investigation.

<sup>2)</sup>Although, *E. coli* is the more precise indicator of faecal pollution, the count of thermotolerant coliform bacteria is an acceptable alternative. If necessary, proper confirmatory tests shall be carried out. Total coliform bacteria are not acceptable indicators of the sanitary quality of rural water supplies, particularly in tropical areas where many bacteria of no sanitary significance occur in almost all untreated supplies.

<sup>3)</sup>It is recognized that, in the great majority of rural water supplies in developing countries, faecal contamination is widespread. Under these conditions, the national surveillance agency should set medium-term targets for progressive improvement of water supplies.

## Annexure -11

### SCHEDULE

(see rule 3(1) and 4(1))

Ambient Air Quality Standards in respect of Noise

Area Code	Category of Area / Zone	Limits in dB(A) Leq*	
		Day Time	Night Time
(A)	Industrial area	75	70
(B)	Commercial area	65	55
(C)	Residential area	55	45
(D)	Silence Zone	50	40

- Note:-
1. Day time shall mean from 6.00 a.m. to 10.00 p.m.
  2. Night time shall mean from 10.00 p.m. to 6.00 a.m.
  3. Silence zone is an area comprising not less than 100 metres around hospitals, educational institutions, courts, religious places or any other area which is declared as such by the competent authority
  4. Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority.

\* dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.

A "decibel" is a unit in which noise is measured.

"A", in dB(A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.

Leq: It is an energy mean of the noise level over a specified period.

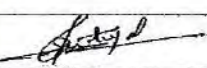
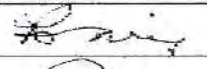
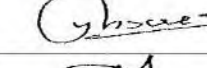
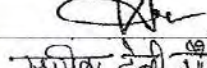
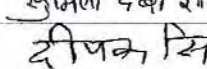
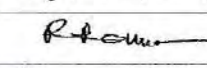
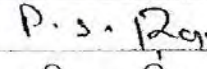
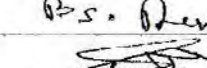


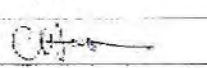

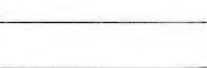

(source : The Noise Pollution (regulation and control) rules, 2000 and its amendment in 2010 and 2012 )

## Annexure -12: PUBLIC CONSULTATION RECORD

Name of the Sub-Project : Uttarakhand Emergency Assistance Project:  
Water Supply Sector, Rudraprayag  
Number of Participants : 14  
Name of the District : Rudraprayag  
Date : 17/09/2016

### PUBLIC CONSULTATION AT RUDRAPRAYAG TOWN

Date: 17.09.2016

Sl.No	Name of the person consulted	Signature	Phone no
1.	Ganesh Nantiyal		9997076636
2.	Rakesh Nantiyal		9412364599
3.	Yashpal singh Bist		8126925373
4.	Vinod Prasad Goswami		7830038822
5.	Sumtra Devi		
6.	Deepak Singh		
7.	Raju Raman		
8.	P.S. Rana		9997 838362
9.	B.S. Rana		97604 06320
10.	S.N. Nautiyal		8958490690
11.	Madhav singh Bhandari		983750 44244
12.	Pradeep Bagbadi		75007 08070
13.	Chetak Bahadur		
14.	N.Naga		
15.			
16.			
17.			
18.			

**Name of the Sub-Project** : Uttarakhand Emergency Assistance Project:  
Water Supply Sector, Kapkot  
**Number of Participants** : 12  
**Name of the District** : Bageshwar  
**Date** : 23/12/2016

**PUBLIC CONSULTATION**

LOCATION: KAPKOT URBAN WATER SUPPLY SCHEME.

DATE: 23.12.2016.

CONDUCTED BY: Mr. Nutan Gupta.

S. No.	NAME	ADDRESS	CONTACT NO.	SIGN
1	Dr. Nutan Gupta	Env. Consultant, PMU	9412153087	Nutan Gupta
2	श्रीधर चन्द देवी	अनन्ता - मोरवा चन्द	9156181609	श्रीधर
3	बिनाश्वर उद्वर	Kapkot	7060208482	Bhishwari
4	RAJESH UPADHYAY	Near Hospital Kapkot	8859095212	Rajesh
5	Seminar Korori	Bharari Presolient (SVC)	7252814856	Seminar
6	Ganesh Narayan	Kapkot	941413772	Ganesh
7	श्रीधर चन्द देवी	Kapkot	8126085509	श्रीधर
8	श्रीधर चन्द देवी	Kapkot		
9	श्रीधर चन्द देवी	Kapkot		
10	श्रीधर चन्द देवी	Kapkot		
11	Rajendra Korori	Bharari	9012356994	Rajendra
12	Devesh Bishnoi	Bharari	911563222	Devesh
13				
14				
15				
16				
17				
18				

**Name of the Sub-Project** : Uttarakhand Emergency Assistance Project:  
Water Supply Sector, Bageshwar  
**Number of Participants** : 17  
**Name of the District** : Bageshwar  
**Date** : 23/12/2016

**PUBLIC CONSULTATION**

LOCATION: BAGESHWAR URBAN WATER SUPPLY SCHEME

DATE: 23/12/16

CONDUCTED BY: Mrs. Nutan Gupta

S. No.	NAME	ADDRESS	CONTACT NO.	SIGN
1	Nutan Gupta	Environment Consultant PMU	9412153087	Nutan Gupta
2	RAJESH UPADHYAY	SURAJKUND	8859095212	Rajesh
3	C.S. MCHTA	SURAJ KUND	9411705373	C.S. Mchta
4	B. S. Sharma	Suraj Kund	9579454181	B.S. Sharma
5	Neeraj Negi	Near Narendra Palace	9456157672	Neeraj
6	Unni Krishnan	Kathayabara	8393826928	Unni
7	Shimshul Kumar	Thakurdara	8968000165	Shimshul
8	Vinod Kumar	Suraj kund	9675798877	Vinod
9	Loyal Rana	Kathayabara	8954623010	Loyal
10	Sandeep Kumar	"	8859026148	Sandeep
11	Ajay Joshi	surajkund	9871225366	Ajay
12	Prakash W. D.	Bageshwar	7060208482	Prakash
13	Deen Dayal	U.S. Bgr	7535018862	Deen Dayal
14	Sachin Khatun	U.S.S Bgr	8954872077	Sachin
15	Saba Khatun	U.T.S Bgr	8954747965	Saba
16	Tara Devi	U.T.S. Bgr	8859351824	Tara
17	Jitaul-hak	U.T.S. Bgr	9412105946	Jitaul-hak
18				

**Name of the Sub-Project** : Uttarakhand Emergency Assistance Project:  
**Number of Participants** : 10+2  
**Name of the District** : Pithoragarh  
**Date** : 29/11/2016

29/11/16

Environmental Management & Monitoring (Bageshwar)  
 Public consultations and information Disclosure

Package Name : Lot 3 DHARCHULA Package No. : Loan No 3055 IND (UEAP-UWS)

Contractor Name : M/S KASHMIRILAL CONSTRUCTION (P) LTD. Contract No. : UK/UEAP-UWS/WSS-KU/01 - DHARCHULA

S.NO.	Name of Person	Address	Contact no.	Signature
1	<del>Mr.</del> Dharma Singh Smt.	Gawal gaun (300KL)	—	E/2011
2	Miss. Asomati	Primary School (300KL)	7593042417	Asomati
3	Smt. Hura Bixht	— do — (300KL)	9410374588	HB
4	Mr. Mahesh Kumar	Mama Khut (25KL)	9458883585	Mahesh
5	Mr. Lokesh Pangti	Mama Khut (25KL)	9410006900	Lokesh
6	Mr. Rahul	Ghatkhala (50KL)	9455597438	Rahul
7	Mr. Soban Singh Kuware	Ghat Khala (50KL)	9411706390	Soban
8	Smt. Greeta Devi (Gram Pradhikarn)	Gialati Village (HFRF)	9456396128	Greeta
9	Mr. Prem Singh	Ramtola Village (HFRF)	7599003281	Prem
10	Mr. Maan Singh	Ramtola Village (HFRF)	9455598645	Maan

29/11/16  
 (M. S. DSC)

**Name of the Sub-Project** : Uttarakhand Emergency Assistance Project:  
Water Supply Sector, Dharchula  
**Number of Participants** : 18  
**Name of the District** : Pithoragarh  
**Date** : 25/12/2016

**PUBLIC CONSULTATION**

LOCATION: Dharchula

DATE: 25/12/16














CONDUCTED BY: Anshuman Gupta (Env. Consultant)

S. No.	NAME	ADDRESS	CONTACT NO.	SIGN
1	Nutan Gupta	Env. Consultant, P.M.U.	9412153087	Nutan Gupta
2	Kamal Kishor	AAE UJS Dharchula	9410534028	Kamal Kishor
3	Lawman Choudhary	Village Prinkhara, Dehal, Dharchula		Lawman Choudhary
4	रविंद्र सिंह	रविंद्र-पुल/कानपुर		रविंद्र सिंह
5	राजेश			राजेश
6	मनिषा	दुईवा		मनिषा
7	अपेक्षित	फौराजी/सह्याज	9458545558	अपेक्षित
8	Prakash Chandra	Jsh Jsh of + tribal Road	9458340959	Prakash Chandra
9	Bharat Singh Bhatt	Dharchula (A.S. Stg)	7579616980	Bharat Singh Bhatt
10	Rajendra Singh	Village post Khat, Dharchula	9456681868	Rajendra Singh
11	Bharat Singh	V+P Ramtoli, Dharchula	9411052105	Bharat Singh
12	Sabarn Singh	V+P Ramtoli, Dharchula	9411052858	Sabarn Singh
13	Jeevan Singh	V+P Ramtoli, Dharchula	7579636820	Jeevan Singh
14	Nar Singh	V+P Ramtoli	9411254289	Nar Singh
15	Jeevan Ram	V+P Ramtoli		Jeevan Ram
16	Shoban Singh	V+ Khat	9411706390	Shoban Singh
17	Kishor Kumar	K.M.V. N.D.R.A.	9456763653	Kishor Kumar
18	Pradeep Bhakuni	Manager K.M.V.N.D.R.A. Chief house/Consigner	9410550793	Pradeep Bhakuni

**Name of the Sub-Project** : Uttarakhand Emergency Assistance Project:  
Water Supply Sector, Karanprayag  
**Number of Participants** : 37  
**Name of the District** : Chamoli  
**Date** : 19/09/2016

**List of Participants - Public Consultation & Focused Group Discussions**

Public Consultations at Karanprayag Date: 19/09/2016		
	Name	Signature
1.	Rajendra Prasad	Rajendra
2.	Sanjay Prasad	Sanjay
3.	Danesh Rawat	Danesh Rawat
4.	P. H. Dimri	P. H. Dimri
5.	अनिल शर्मा	अनिल शर्मा
6.	Sandeep Lal	Sandeep Lal
7.	Sandeep Bisht	Sandeep Bisht
8.	Anand Singh	Anand Singh
9.	अनिल शर्मा	अनिल शर्मा
10.	अनिल शर्मा, प्रशासक, ग्रामपंचायत	अनिल शर्मा
11.	अनिल शर्मा	अनिल शर्मा

S.No	Name	Signature
12	Himmat Mehta	
13	1. Lal Raj Khonduri सर्वेश पासवान	
14	स-द लाल	
15	राम प्रभाश कर्डवाल	
16	आर. व. कुमल	
17	Ramesh Khonduri	
18	Narayanadas Kothari	
19	Jay Prakash Khonduri	
20	विजय कुमार	
21	HARI DEVI	
22	Hari Ram	
23	Rakesh Kumar	
24		

25	प. लाल आलम	प. लाल आलम
26	अमर	अमर
27	Yes Lal Bishal	Yes Lal Bishal
28	Ralbinder Singh	Ralbinder Singh
29	आर्य विनोद	आर्य विनोद
30	विनोद कुमार	विनोद कुमार
31	गीता कपराव	गीता कपराव
32	Poinco Rana	Poinco Rana
33	अमर	अमर
34	Amrit Lal	Amrit Lal
35	शुभम	शुभम
36	राज कुमार	राज कुमार
37	Nishant Kaurasi	Nishant Kaurasi
38		
39		

Name of the Sub-Project : Uttarakhand Emergency Assistance Project:  
Water Supply Sector, **Srinagar**  
Number of Participants : **13+2**  
Name of the District : **Pauri**

# List of Participants - Public Consultation & Focused Group Discussions

DATE 18/11/16

PUBLIC CONSULTATION MEETING

Sl. No.	Name of attended public	MOB. NO.	Signature
01	Prasad Nayal	9412949953	
02	Ram Krishna Rajput	9927009707	
03	Laxman Singh	9760624895	
04	Bijoy Singh	80066336218	
05	Dipak Badoni	9917577740	
06	Ravinder Singh	9760153324	
07	Chandramohan Khatri		
08	Narinder Kumar	9454275462	
09	Sangeet Sharma	9837025790	
10	Nikhil Sharma	7037577156	
11	Rakesh Kumar	91927082446	
12	Amal Kumar	8864987277	
13	Chandan Singh Rawat	9568875622	

The above meeting is held in presence of DSC's staff member by the contractor.

Rakesh Kumar (D. en. Gupta)

Name of the Sub-Project : Uttarakhand Emergency Assistance Project:  
Water Supply Sector, Uttarkashi  
Number of Participants : 17+2  
Name of the District : Uttarkashi

List of Participants - Public Consultation & Focused Group Discussions

Place of Consultation : Uttarkashi town

Date:- 25.09.2016.

**PUBLIC CONSULTATION**

S.No.	Name	Location	Signature / M.No
1	Vishal Mann (Shopkeeper)	Bhatwari Road Uttarkashi	9416790035
2	Kam Dew Vash (Shopkeeper)	Bhatwari Road Uttarkashi	9759365552
3	SHIVKAR Singh (Shopkeeper)	Bhatwari Road Uttarkashi	9756696128
4	(Shopkeeper) - 9	गुफियारा उत्तरकाशी	9837977953
5	रविशंकर (फोटर ललसंस्थान)	गुफियारा उत्तरकाशी	
6	महेश्वर शर्मा (दुकानदार)	गुफियारा उत्तरकाशी	9536551566
(7)	अलीम शाह (दुकानदार)	रामलीला मंदिर उत्तरकाशी	8923661702
(8)	प्रेम कलश	अलीम शाह	
(9)	प्रेम कलश (दुकानदार)	रामलीला मंदिर उत्तरकाशी	9997456694
10	सतीश गुडा	ग्राम- बिलोष	9799261092
11	विनोद गुडा	ग्राम- बिलोष	9410545170
12	अमर सिंह (दुकानदार)	ग्राम- बिलोष	9760476862
13	गुलराज सिंह (दुकानदार)	ग्राम- बिलोष	9634707374
14	गणेश गुडा (दुकानदार)	ग्राम- बिलोष	9786227328
15	प्रकाश कुमार यादव (फोटर ललसंस्थान)	ग्राम- बिलोष	91059706723
16	नेत्र शर्मा (दुकानदार)	ज्ञानसु	8999271799
17	राजेश जोशी	ज्ञानसु	9410721951

## ANNEXURE 13: PUBLIC CONSULTATION PHOTOGRAPHS



Srinagar



Rudraprayag



Gauchar



Karanprayag



Devprayag



Bageshwar



Kapkot



Dharchula



Devprayag



## Annexure -14

### PHOTOGRAPHS OF ENVIRONMENTAL MONITORING (July to December, 2016)



Noise Monitoring Bageshwar



Soil Monitoring Bageshwar



Air Monitoring Bageshwar

### Bageshwar water supply scheme (September, 2016)

	
<p>Air monitoring Randhi Gad, Devprayag</p>	<p>Water sampling Randhi Gad, Devprayag</p>
	
<p>Noise Monitoring Randhi Gad, Devprayag</p>	<p>Soil Sampling Randhi Gad, Devprayag</p>

**Devprayag Water Supply Scheme (December, 2016)**

## ANNEXURE 15: PHOTOGRAPHIC ILLUSTRATION OF EMP IMPLEMENTATION AT WORK SITES



OSHA on-site training to labourers at Devprayag



Barricading on-site at Srinagar



First Aid Kit Available on site



Provision of Fire Safety at Kapkot Pump house



Labours using PPEs during work

## ANNEXURE 16: PHOTOGRAPHS OF PROJECT INFORMATION BOARDS AND MAINTENANCE OF GRIEVANCE REGISTER



Project Information Boards in English and Hindi at sites with Grievance number



Grievance registers being maintained in the office of F-PIU

## ANNEXURE 17: PHOTOGRAPHS OF PROGRESS OF WORK



50 KL GLSR Devprayag



Office Building, Devprayag



Tube well work is in progress in Srinagar



1000KL GLSR, Srinagar



Infiltration well, Gauchar



Office Building, Gauchar



500KL GLSR, Karanprayag



100 KL sump in progress at Kaleshwar, Karanprayag



Office Building, Rudraprayag



Office Building, Karanprayag



Pump House, Uttarkashi



Infiltration well, Bageshwar



300KL GLSR, Dharchula



Infiltration Well, Kapkot