

Environmental and Social Management Plan (ESMP)
Water Supply Scheme in Khanewal City
MC Khanewal
Revised Version After incorporation WB Comments

Table of Contents

Executive Summary	1
Section-1 Introduction	5
1.1. Punjab Cities Program (PCP)	5
1.2. Environment & Social Management Framework (ESMF)	5
1.3. Environment & Social Assessment Categories	5
1.3.1. Environmental Categories:.....	5
1.3.2. Social Categories:.....	6
1.3.3. Environment & Social Assessment Category of the Sub-project	6
1.4. Objectives of ESMP	7
1.5. Study Methodology	7
1.6. Sub-Project Team	8
Section-2 Sub-Project Description	9
2.1. Area Description	9
2.2. Project Layout Map	11
2.3. Problem Statement	11
2.4. Description of Work Activities	12
2.5. Cost estimates	12
2.6. Duration of the Sub-project	13
2.7. Construction Scheduling	13
2.8. Rationalization of Sub-project	13
2.9. Material Requirement	13
2.10. Temporary Storage Area	13
2.11. Contractor's Camp	14
2.12. Accessibility	14
2.13. Machinery & Equipment	14
2.14. Manpower Requirement	16
2.15. Existence of Utility Services within RoW	16
2.16. Vegetation Removal/ Tree Cutting	16
2.17. Sub-project Alternatives	16
2.17.1. Site Alternative.....	16
2.17.2. Design Alternative.....	16
2.17.3. Scope of Work Alternative.....	17
Section-3 Legal & Policy Framework	18
3.1. Introduction	18
3.2. Policy & Regulatory Review of Social Aspects	18
3.2.1. National and Provincial Policies	18
3.2.2. National and Provincial Laws, Regulations, Procedures and Guidelines	18

Environment & Social Management Plan (ESMP)

3.3. Policy & Regulatory Review of Environmental Aspects	18
3.3.1. Policy Framework	19
3.3.2. National and Provincial Laws, Regulations, Procedures and Guidelines dealing with the Environmental Aspects	19
3.4. World Bank Policy Core Principles and Applicability on Sub-project	20
3.4.1. World Bank Environmental, Health and Social Guidelines	21
3.4.2. COVID-19 SOPs.....	22
Section-4 Environment & Social Baseline.....	23
4.1. City profile.....	23
4.2. Climate.....	23
4.3. Demographic Status	24
4.4. Water Resources.....	24
4.4.1. Water Quality	25
4.5. Water Supply System	15
4.5.1. Service Delivery Level	15
4.6. Seismologic Zone	15
4.7. Natural Disasters Data.....	16
4.7.1. Potential hazards of the District Khanewal	16
4.8. Environmentally Sensitive Receptors	17
4.9. Flora & Fauna.....	17
4.10. Socially Sensitive Receptors	17
4.11. Land Use	18
Section-5 Stakeholder Consultation	19
5.1. General	19
5.1.1. Primary Stakeholders.....	20
5.1.2. Secondary Stakeholders.....	20
5.1.3. Disclosure of Sub-project Information	20
5.1.4. Future Consultation Plan	20
5.2. Public Consultation at E&S Screening Stage	20
5.3. Gender Consideration	23
Section-6 Grievance Redress Mechanism.....	24
6.1. GRM AT SUB-PROJECT SITE	24
6.2. GRM at Regional Level	25
6.2.1. Types of Grievances	26
Section-7 Impacts And Mitigation	27
7.1. Labor & Community Health & Safety.....	27
7.2. Construction Waste Management & Disposal	27
7.2.1. Pipe Boring and Minor Excavation Material.....	27
7.2.2. Waste Water Generation	27

Environment & Social Management Plan (ESMP)

7.2.3. Construction Material	28
7.3. Zone of Impact	28
7.3.1. Direct Impacts.....	28
7.3.2. Indirect Impacts	29
Section-8 Environmental and Social Management and Monitoring Plan	35
8.1. Objective	35
8.2. Mitigation Plan	35
8.3. Monitoring Plan.....	35
8.4. Monitoring Mechanism.....	35
8.5. Reports	36
8.6. Inclusion of ESMP In Bidding/ Contract Documents.....	36
8.7. Monitoring of Environmental and Social Non-Compliance.....	37
8.8. Environmental and Social Management and Monitoring Plan.....	37
8.9. Environment and Social Management Plan Implementation Budget	47
Section-9 Capacity Building	48
9.1. General	48
Section-10 Institutional Framework.....	50
10.1. Local Government and Community Development Department (LG&CDD).....	50
10.2. Punjab Municipal Development Fund Company (PMDFC).....	50
10.2.1. Central Program Management Team (CPMT).....	51
10.2.2. Regional Program Management Team	51
10.3. Municipal Committee Khanewal	51
10.4. Environment Protection Department (EPD)	51
10.5. Contractor	51

List of Figures

Figure 2-1: Present Condition of Sub-project area for Installation of Tube Wells	9
Figure 2-2: Present Condition of subproject area for repair of OHRs.....	10
Figure 2-4: Khanewal City- Water Supply Scheme Map.....	11
Figure 4-1: Project Area Seismic Zone Location	15
Figure 5-1: Pictorial view of Public Consultation and Public Meetings	21

List of Tables

Table 1-1: Composition of Sub-project Team	8
Table 3-1: National and Provincial Laws, Regulations, Procedures and Guidelines dealing with the Environmental Aspects	19
Table 4-1: Seismic Zones of Tehsils of Pakistan	16
Table 4-2: Risk Analysis of Potential Hazards of District Khanewal.....	16
Table 8-1: Environmental & Social Management & Monitoring Plan.....	38
Table 8-2: Environmental Implementation Budget.....	47
Table 9-1: Training / Awareness and Sensitization Plan.....	48

List of Annexures

Annexure I: Environment & Social Screening Checklist	47
Annexure II: EHS SOPS for Labors/Workers (Including Women Labor/worker) for Construction of Development Project, (URDU).....	105
Annexure III: COVID-19 Pandemic and Health Safety Measures	131
Annexure IV: List of Persons Consulted.....	133
Annexure V: Personal Protective Equipment According to Hazard	134
Annexure VI: Environmental & Social Monitoring Checklist.....	135
Annexure VII: Chance Find Procedures.....	140
Annexure VIII: Water Quality Analysis Report	141

ACRONYMS

AHs	Affected Households		
BOD	Biological Oxygen Demand	MC	Department
DPO	Deputy Program Officer	MO-I	Municipal Corporation/Committee
CO	Chief Officer	MO-P	Municipal Officer Infrastructure
CPMT	Central Program Management Team	NEQS	Municipal Officer Planning
CTS	Complaints Tracking System		National Environmental Quality Standards
DPO	Deputy Program Officer	NOC	No Objection Certificate
EHS	Environment Health & Safety	OHS	Occupational Health & Safety
EIA	Environmental Impact Assessment	OPs	Operational Policies
EMMP	Environmental Management and Monitoring Plan	PAPs	Project Affected Persons
		PC-I	Planning Commission Form-I
EPA	Environment Protection Agency	PCP	Punjab Cities Program
EPD	Environment Protection Department	PCRs	Physical Cultural Resources
ESFPs	Environmental & Social Focal Persons	PD	Project Director
ESM	Environmental & Social Management	PDO	Program Development Objectives
ESMF	Environmental & Social Management Framework	PEPA	Punjab Environment Protection Act
		PHED	Public Health Engineering Department
ESMP	Environmental & Social Management Plan	PMDFC	Punjab Municipal Development Fund Company
ESMMP	Environmental & Social Management and Monitoring Plan	PMU	Project Management Unit
		PPEs	Personal Protective Equipment
ESSs	Environmental & Social Safeguards	PO	Program Officer
GoP	Government of the Punjab	RoW	Right of Way
GRC	Grievance Redress Committee	RPF	Resettlement Policy Framework
GRM	Grievance Redress Mechanism	SMP	Social Management Plan
HIV/AIDS	Human Immunodeficiency Virus / Acquired Immune Deficiency Syndrome	SOPs	Standard Operating Procedures
		SPOs	Senior Program Officer
HSE	Health Safety & Environment	STIs	Site Transmission Infections
IEE	Initial Environmental Examination	TORs	Terms of References
LG&CD	Local Government & Community Development	WB	World Bank

Executive Summary

Government of Punjab (Govt. of Punjab) sought support from the World Bank for the economic growth of urban sectors in Punjab and launched Punjab Cities Program (PCP). Program is expected to achieve overarching goals of ending poverty and promoting shared prosperity by delivering improved urban infrastructure inclusively and in ways that enhance economic growth and development in the participating cities. The Project has a number of financial, social, economic and environmental benefits, including institutional development, rehabilitation and improvement of municipal services, capital investments, better quality of life and employment generation. In addition, a large number of secondary benefits are also likely to accrue in the medium to long term such as institutional reforms at the local level. Environmental and social management under the program will be largely based on the existing legal, regulatory and institutional systems in Pakistan and in the Punjab province. PCP IPF Window (technical assistance component) supports the strengthening of social and environmental risk management systems in the participating cities. It will finance the strengthening of:

- Social and environmental focal points in each city;
- The creation of social and environmental management system at the city level; and
- Rolling out a training program by PMDFC for city officials.

This Environmental and Social Management Plan (ESMP) is prepared according to the World Bank Core Principles and Environmental and Social laws of Government of Punjab (GoPb). It will be used to identify and mitigate the environmental and social impacts that may emerge during implementation of proposed Sub-project “Installation of 03 Tube-wells with Rehabilitation of 03 Overhead Reservoirs & Laying of Water Supply lines, in Khanewal City” which will be executed by MC Khanewal from the financial grant of PCP. This ESMP follows the social and environmental appraisal and compliance as mentioned in the Environmental and Social Management Framework (ESMF) of PCP.

Sub-project Summary:

Scope of Work	Rehabilitation and installation of 03 Tube-wells with allied E&M works including rehabilitation of existing 03 Over Head Reservoirs in Colony No.1, Peoples Colony and 3-Marla Abadi near Kurrampura.
Location	Colony No.1, Peoples Colony and 3-Marla abadi near Kurrampura, Khanewal City
Sub-project Cost	47.48 million PKR including 2.217 million PKR as Environmental and Social Management Plan Implementation Cost.
Sub-project Duration	06 Months approx.

Major Work Activities	<ol style="list-style-type: none"> i. Trial bore, electrical resistivity survey and ground water potential external investigations (if trial bore is not feasible, the contractor will select alternate suitable site ensuring the aquafer sustainability and permissible (as per PEQS) water quality ii. Pipe Boring and conversion into tube well having discharge of 1.5 cusec. iii. Construction of Pumping chamber 12'x12' size iv. Providing, installing Vertical Turbine Pump & Specials v. Installation of Bulk water flow meter vi. Providing, Installing of hypo- chlorinators vii. Repair of Overhead Reservoirs viii. Providing laying jointing of 8" i/d Rising main from Tube well to existing Rising main of OHR ix. External electric connection through WAPDA x. Laying of Water Supply Lines (05)
Executing Agency	MC Khanewal
Monitoring Agency	Punjab Municipal Development Fund Company (PMDFC)
Sub-project Financed By	World Bank under Punjab Cities Program (PCP)
Environmental Category	E-2
Social Category	S-2

Environment & Social Management:

Screening of Impacts: The ESMF presents an Environment & Social Screening Checklist for screening and categorization of Sub-projects which has been used to screen the impacts of installation of tube wells for domestic water supply Sub-project and filled as per the environmental and social survey conducted for the Sub-project area (11 screening checklists for each activity of the project i.e. installation of 03 tube-wells, laying of 05 water supply lines and rehabilitation of 03 OHRs were prepared in field and are attached as Annexure I).The screening checklist suggested that environmental and social impacts of Sub-project are minor to moderate and temporary and can be mitigated and managed with prevailing civil construction measures. The Sub-project has been categorized as E2 on the following grounds:

- Noise generation and exhaust emissions during boring and material transport.
- Wastewater disposal issue.
- Creation of temporary breeding habitats for diseases
- Safety issues during tube well installation
- Health issues in case on water containing toxic elements such as Arsenic
- Depletion of water table that would result in further deep extraction and more power consumption for water abstraction

The Sub-project does not involve any human displacement or resettlement, however keeping in view the environmental impacts that may temporarily affect the surrounding communities of 1-40 households, Sub-project is characterized as social category S2.

Impact Assessment:

Most of the Project's environmental and social impacts will be beneficial i.e. installation of 03 tube wells, rehabilitation of 03 OHRs and laying of supply lines for domestic water supply shall result in improvement of infrastructure of municipal services for water supply in the Sub-project vicinity. Although most of the project related activities will be confined within the boundary wall of premises owned by local government except for laying of water supply lines where some temporary disturbance to commutation of local community may occur for a very short period of time. However, during construction phase, there will be some negative environmental and social impacts including, waste water and dust generation due to pipe boring and temporarily dumping of extracted material before it is reinstated or transported to a proper disposal site. There will be no impact on PCRs as project interventions are outside of the PCR boundaries. There is no environmentally sensitive receptor within RoW of the Sub-project. There are community safety and occupational safety prospects envisaged. Land acquisition is not required in the execution of Sub-project.

Mitigation Measures:

These impacts require appropriate mitigation and management measures to contain them. The Sub-project specific measures suggested are:

- ESFPs and DPO-ESM (PMDFC Regional team) will conduct regular visits to the construction sites to monitor the compliance of ESMP and supervision consultants shall be visiting and reporting regularly
- Earth material generated during the pipe boring and excavation activities will be reinstated or disposed of on daily basis at MC designated dumping point
- Waste water generated during Pipe Boring for tube wells will be pumped immediately to avoid mosquitos breeding and nuisance.
- Construction waste will be disposed of simultaneously
- Public passage ways will be kept clear by the Contractor
- Public safety will be ensured by installing barricade and safety sign boards around work site
- Workforce will be provided with the Personal Protective Equipment (PPEs)
- COVID-19 SOPs will be followed during construction phase
- Contractor will use new or efficient machinery and equipment to reduce noise and air pollution impacts
- Contractor's staff and workers will avoid any interaction with local community particularly women to ensure that privacy of the households in not disturbed during the course of Sub-project.

Grievance Redress Mechanism (GRM):

Proposed GRM for subproject implementation will cater to all subproject beneficiaries. This is proposed that exiting Complaint Tracking System (CTS) will be transformed into GRM. The proposed GRM mechanism will be based on three-tier Grievance Redress Committees (GRC)

Environment & Social Management Plan (ESMP)

at regional level, PMDFC/ LG & CDD level & GRC MC. A Grievance Redress Committee (GRC- PMDFC/LG&CDD) will be responsible to oversee the overall functions of the GRM at a strategic level including monthly reviews. It will be headed by the Secretary LG & CDD. Grievance Redress Committee MC and Grievance Redress Committee Regional level will play an instrumental role in steering the GRC functions at both city and regional level. A record of the grievance redress system will be maintained and analyzed regularly to identify projects weaknesses and bottlenecks (if any) and user satisfaction with the GRM. ESMF GRM will be integrated with the PCP's overall program GRM hotline to be developed by the Consultants under the scope of PCP.

Stakeholder Consultations:

Stakeholder consultations were carried out during preparation of ESMP. Interviews were undertaken with primary stakeholders including shopkeepers, inhabitants (households), and key notable persons to discuss present working condition of sewer-lines. Meetings were held with MC Officials (CO, MOI, MOP, Sub-Engineers) and key environmental and social issues were discussed. Consultations revealed that overwhelming majority of the respondents were not satisfied with the current working condition of water supply system in their areas and it caused severe water shortage as well as health issues because of water borne and vector borne diseases. All the respondents were in favor of replacement of these tube wells as soon as possible.

ESMP Implementation Cost:

The total cost of the ESMP implementation has been estimated to be about Pak Rupees 2.217 million.

Section-1 Introduction

1.1. Punjab Cities Program (PCP)

Punjab Cities Program (PCP) Program-for-Results (PforR) will support participating Municipal Committees (MCs) to improve their urban management and service delivery performance. The operation will provide capacity-building and institutional support to 16 secondary cities in Punjab, with an estimated total population of 4.1 million, half of whom are female.

Program Development Objectives (PDO) *is to strengthen the performance of participating urban local governments¹ in urban management and service delivery.*

By achieving the Program Development Objective (PDO), the operation is expected to contribute to the World Bank's overarching goals of ending extreme poverty and promoting shared prosperity by delivering improved urban infrastructure on an inclusive basis and in ways that enhance economic growth and development in the participating cities. Achievement of the PDO will also make a significant contribution to attaining Sustainable Development Goal-11 (sustainable cities and communities).

The Project has a number of financial, social, economic and environmental benefits, including institutional development, rehabilitation and improvement of municipal services, capital investments, better quality of life and employment generation. In addition, a large number of secondary benefits are also likely to accrue in the medium to long term basis such as institutional reforms at local level.

1.2. Environment & Social Management Framework (ESMF)

Environmental and Social Management Framework (ESMF) has been prepared for Punjab Cities Program (PCP). This ESMP is prepared as per the policy guidelines defined in the ESMF of PCP.

1.3. Environment & Social Assessment Categories

1.3.1. Environmental Categories:

Depending on size, cost, location and the nature, scheme will have varying impacts on city environment. The rigorousness of environmental assessment requires identifying and mitigating the impacts, largely dependent upon the complexities of scheme. To facilitate effective screening, ESMF categorized schemes into three categories viz. E-1, E-2 and E-3.

- E-1 schemes are those wherein major environmental impacts are foreseen;
- E-2 schemes are expected to have only moderate environmental impacts; and
- E-3 schemes are the schemes with negligible environmental impacts and hence, these can be termed as “environmentally benign”.

1.3.2. Social Categories:

Based on the number of households that may be affected by the scheme, i.e., Affected Households (AHs) and magnitude of impacts, schemes are categorized as S-1, S-2 and S-3.

- S-1 schemes are those schemes that will impact more than 40 households, and are expected to have significant negative social consequences;
- S-2 schemes are those which will impact less than 40 households and are expected to have significant social consequences affecting local inhabitants
- S-3 schemes are not expected to have any significant adverse social impacts.

1.3.3. Environment & Social Assessment Category of the Sub-project

Sub-project has been screened to assess the environment and social impacts anticipated as per scope of work. As per findings of the site visit conducted on 03.08.2022, discussion with officials and stakeholder consultations, Sub-project area does not fall in any of the wildlife habitat or reserve area/ environmental sensitive areas; therefore, it will not cause any harmful environmental impact directly or indirectly during or after execution of civil works.

Sub-project will have no irreversible environmental and social impacts. There are some moderate environmental impacts (Pipe Boring, minor excavations and civil works) as per scope of work which will be minimized by providing mitigation measures mentioned in Table 8-1. Sub-project is categorized as E-2 and ESMP is prepared under this category.

Due to laying of water supply lines, temporary disturbance to commutation of local community may occur. Involuntary land acquisition is not required, and therefore there will be no physical displacement or impacts on livelihoods nor restrictions on access of the local community. Sub-project may have temporary and localized impacts on 1-40 households therefore, Sub-project is categorized as S-2. Accordingly, ESMP has been prepared in accordance with provincial and national legislation, and the World Bank’s Core Principles. The number of mitigations included in the ESMP is based on the scope of work.

Environment & Social Management Plan (ESMP)

The Environmental and Social Management Plan (ESMP) is prepared in compliance with the guidelines provided in the Environmental and Social Management Framework (ESMF) for the following Sub-project:

“ Installation of 03 Tube-wells with Rehabilitation of 03 Overhead Reservoirs & Laying of Water Supply lines, in Khanewal City”

1.4. Objectives of ESMP

The primary objectives of the ESMP are as follows:

- Facilitate the implementation of the identified mitigation measures.
- Define responsibilities of the project proponents, Contractor, and other members of the project team.
- Define a monitoring mechanism and identify monitoring parameters in order to ensure complete implementation of all mitigation measures and ensure effectiveness of the mitigation measures.

1.5. Study Methodology

This was based on a combination of fieldwork (e.g., meeting with officials, walk through survey, public consultations etc.) and desk reviews (gap analysis reports, PC-I) as deemed necessary to meet the needs of the ESMP.

Subproject Description: Sub-project documents have been reviewed to reflect the proposed interventions/mitigation measures in the ESMP. This information is collected and analyzed as part of ESMP process. A detailed review of information is presented in the Project description section.

Legislative Review: A legislative review has been conducted for the project. This included a review of all the related national and provincial legislation, guidelines and WB Core Principles which are relevant to the Sub-project and applicable in conducting ESMP study. ESMF has been thoroughly reviewed to tag environmental & social category to this Sub-project.

Environmental and Social Surveys: After the review of the Sub-project information, detailed environmental and social survey was conducted to collect primary information for the Sub-project area. The environmental survey was focused on collection of specific baseline information of the Sub-project area including existence of environmental & social sensitive

Environment & Social Management Plan (ESMP)

receptors along with the alignment of the Sub-project which may be influenced direct or indirect due to any construction activity. The social survey was focused on the specific aspects of subproject area including infrastructure and utilities, gender, survey of PCRs, water supply system, and the survey of land use/land acquisition requirement if any. The socio-economic data was collected from business people and households that are located outside the boundary of Sub-project area but use the Sub-project roads for commuting.

Stakeholder Consultation and Participation: Stakeholder consultations were carried out during preparation of ESMP. A series of interviews were undertaken with primary stakeholders including businessmen and households located in the vicinity of the Sub-project. Meetings were held with MC Officials (Sub-Engineers, MO-I, MO-P and CO) and key environmental and social issues were discussed.

Identification and Assessment of Environmental and Social Impacts and Mitigation Measures: Environmental and Social aspects and their associated impacts were considered for proposed interventions under the Sub-project. Specific mitigation measures were proposed to minimize the significant environmental and social impacts. Environment and Social Management and Monitoring Plan (ESMMP) is developed for the implementation of the mitigation measures identified during the study.

ESMP Implementation Budget: Budgetary requirements have been proposed for the OHS essentials & activities proposed for the subproject.

1.6. Sub-Project Team

Following team members participated during the preparation of ESMP.

Table 1-1: Composition of Sub-project Team

Sr. No.	Name	Designation	Department
01	Mr. Umar	DPO-E&SM	PMDFC
02	Mr. Zain Ali	Municipal Officer (I&S)	MC Khanewal
03	Dr. Ashraf Bodla	Chief Environmentalist	MMP
04	Mr. Moazzam Ali	Environmentalist	MMP
05	Mr. Nasir Altaf	Sociologist	MMP

Section-2 Sub-Project Description

2.1. Area Description

The Sub-project lies in Colony No.1, People’s Colony, & 3 Marla Scheme near Khurram Pura area of Khanewal city. Sub-project comprises of:

- Installation of 03 Tube-wells at MC owned land (one tube-well at already existing tube-well and OHR site, one tube-well at already existing tube-well site and one tube-well at already existing OHR site)
- Rehabilitation of 03 Overhead Reservoirs
- Laying of 05 Water Supply lines from MC owned land

The tube wells and overhead reservoirs are located in the residential area whereas water supply lines will be laid down along the main roads shoulders located in semi commercial cum residential area (however, water supply lines Row is much away from the shops) and in the middle of the lanes in residential *mohallas*.

The present physical condition of the site is presented in the Figure 2-1.



Figure 2-1: Present Condition of Sub-project area for Installation of Tube Wells



Figure 2-2: Present Condition of subproject area for repair of OHRs



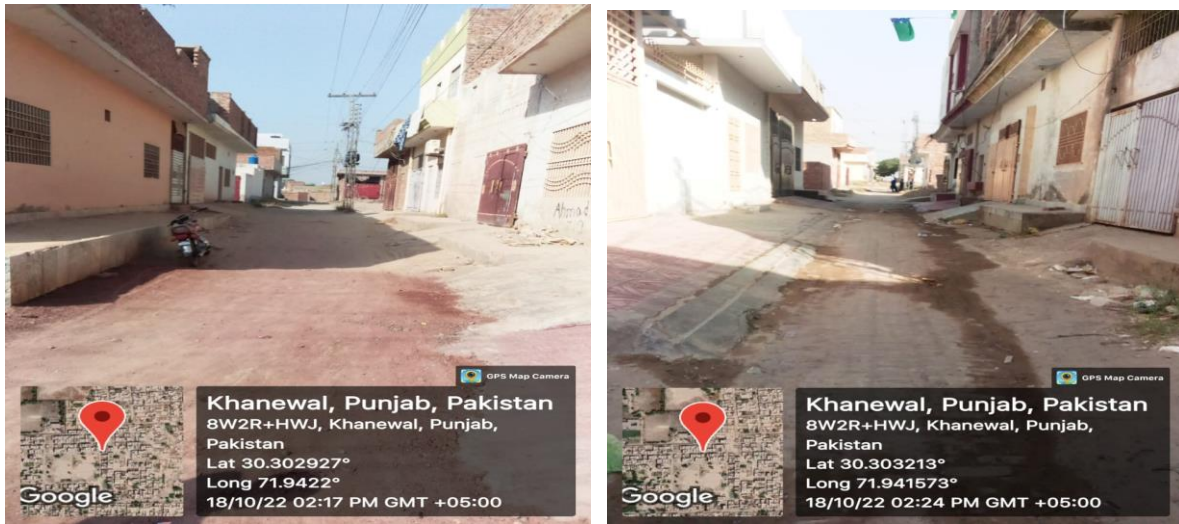


Figure 2-3: Right of Way for Laying Water Supply Lines

2.2. Project Layout Map

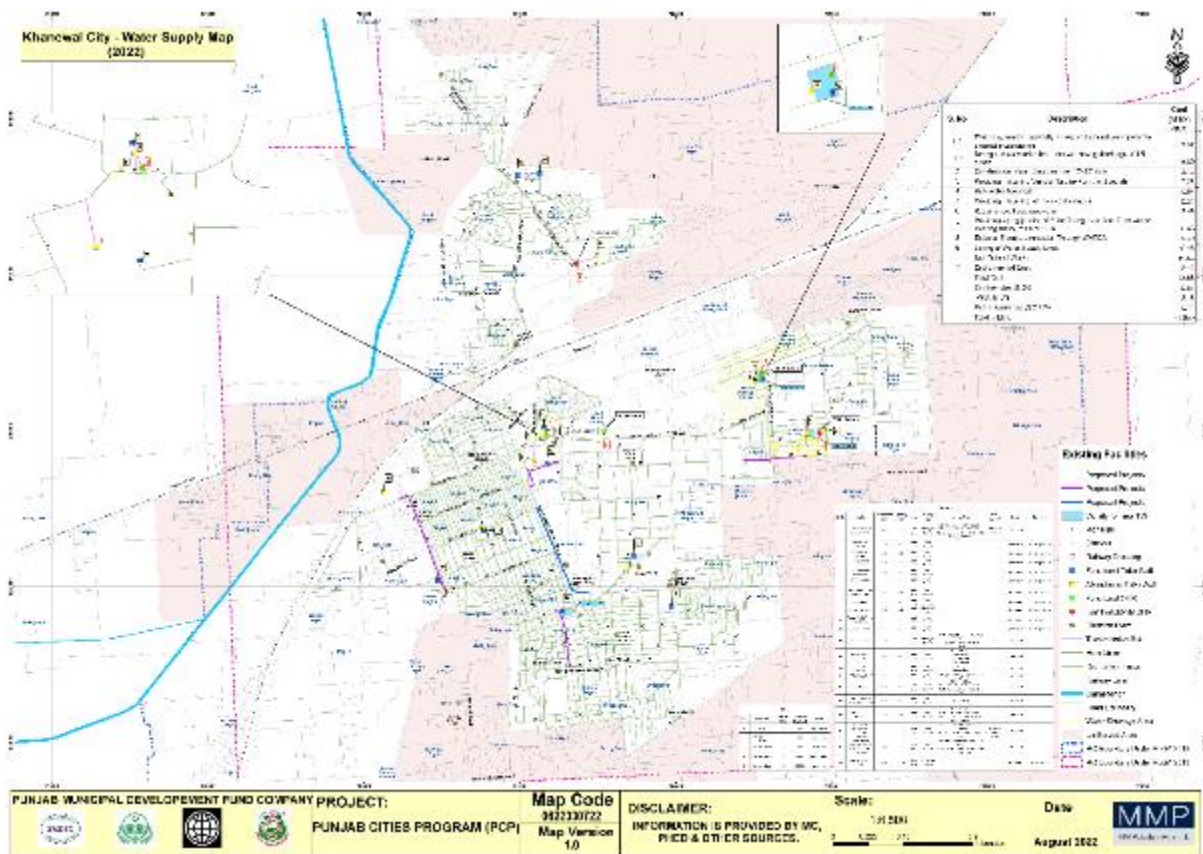


Figure 2-3: Khanewal City- Water Supply Scheme Map

2.3. Problem Statement

This Sub-project has been formulated on the basis of complaints from the community of Sub-project vicinity about non availability of adequate quantity of water as required by people living in the area due to inefficiency of old tube wells regarding pumping of water up to desired level

on routine basis at Colony No. 1, Health Colony, People's colony and particularly the issue of absence of water supply lines in 3 Marla housing scheme near Khurram Pura. The machinery of old tube wells had been deteriorated with the passage of time and it had become challenging to maintain their pumping capacity to meet the increasing water demand of growing population of above-mentioned areas. The structures of overhead reservoirs have badly damaged due to weather effects with the passage of time and pose threat to the workers as well as local community living near and need thorough repair or rehabilitation, therefore, MC Khanewal has decided to rehabilitate the 03 OHRs, lay new water supply lines and install 03 new tube wells under this Sub-project.

2.4. Description of Work Activities

Installation of 03 new Tube Wells at already existing land (02 has boundary wall and previously installed tube-wells while one tube-well is installed along-with existing OHR which is MC owned and vacant with no redundant boundary wall)

05 domestic water supply lines to be installed at MC owned RoW (3 supply lines will be installed crossing the residential and semi commercial area while 2 supply line will be installed along the MC owned main roads beyond the residential areas

Rehabilitation of 03 existing OHRs

Following replacement/improvement activities are involved during the execution of work.

- Trial bore, electrical resistivity survey and ground water potential external investigations
- Pipe Boring and conversion into tube well having discharge of 1.5 cusec.
- Construction of Pumping chamber 12'x12' size
- Providing, installing Vertical Turbine Pump & Specials
- Installation of Bulk water flow meter
- Repair of Overhead Reservoirs
- Laying of water supply lines of 3 inch
- Providing, Installing of hypo chlorinators
- Providing laying jointing of 8" i/d Rising main from Tube well to existing Rising main of OHR
- External electric connection through WAPDA

2.5. Cost estimates

Total cost of the scheme: 47.48 million/- PKR (Excluding ESMP cost)

ESMP implementation cost: 2.217 million/- PKR (Break-up of this cost described below in Table 8-2)

2.6. Duration of the Sub-project

Implementation Schedule/ Duration: 06 month maximum.

No. of workers involved: 20 approx.

2.7. Construction Scheduling

From the beginning of construction to the commissioning of the Sub-project is estimated to take approximately 06 months. The various construction phases of the Sub-project are discussed in relation to mitigation measures. Contractor will be instructed to bore and excavate earth to in order to avoid excessive dust generation. Contractor will immediately pump and remove all waste water generated during Pipe Boring activity. Contractor will remove earth material excavated during laying of supply lines at designated place approved by supervision consultants or reuse it as construction material with the approval of supervision Consultant. Contractor will also dump construction material in a way to cause minimum construction waste as well as minimum hindrance to commutation of general public simultaneously. Contractor will make all necessary arrangements for the safety of his workers. Contractor will take all necessary mitigations to make Sub-project environment friendly and socially sustainable.

2.8. Rationalization of Sub-project

Sub-project is based on complaints received from the locals and on dire need basis because existing water supply lines have become inefficient with the passage of time to cater water demand of masses. People living in Sub-project area are suffering from water borne diseases due to water containing toxic elements such as Arsenic and other toxic substances. Sub-project includes Installation of 03 Tube-wells with Rehabilitation of 03 Overhead Reservoirs & Laying of Water Supply lines, in Khanewal City to resolve long-standing issue of the inhabitants.

2.9. Material Requirement

Contractor will utilize excavated material for refilling of tranches after laying new supply lines and installation of tube wells with the approval of the Engineer. Contractor will dispose of construction waste at designated place of the MC.

2.10. Temporary Storage Area

As, this Sub-project is of short duration, henceforth, land will be rented out with mutual negotiation between owner of the land and the contractor. Contractor will be bound to pay the land title holder for temporary storage of construction material. Contractor will systematically

layout his construction material alongside the alignment of sewer-lines as per scope of work to avoid hindrance in the movement of public and transport.

2.11. Contractor's Camp

Approximately 95% of the workforce will be from the Sub-project area while some 5% of labor (skilled) might be hired from outside the Sub-project area. Contractor's camp may not be required due to limited scope of work/ duration of Sub-project. Contractor will provide complete health care facilities especially first aid on the project site. If Contractor will establish any labor camp; Campsite Management Plan required to be submitted to DPO-ESSs for review.

2.12. Accessibility

As the installation of tube wells will be done at proposed sites which are within boundary wall of premises owned by MC except for new supply lines and for that, the contractor will disseminate information about on-going construction activities by installing safety signage for pedestrians as well as traffic. Contractor will install diversion routes sign boards on-site (if required). Flagmen will also be deployed to direct traffic and avoid any mishaps/ accidents. Contractor will submit Traffic Management Plan to MC for review and approval and it will be communicated to the public and pasted at the prominent places. Contractor will ensure that local residents are informed well before time about the work activities and carry out work of installation of supply lines in the residential *mohallas* at the time when minimum hinderance in accessibility may arise and labor will be instructed to not interfere in the privacy of women and their accessibility.

2.13. Machinery & Equipment

It is estimated that the equipment given below will be required to complete the different Sub-project engineering activities

- Mixer Machine (01)
- Excavator (JCB) (01)
- Rig (01)
- Crane (01)

Contractor will use well-tuned machinery to minimize air pollution and noise. Contractor will never park their machinery on the working area to avoid obstacles in the mobility of commuters. Machinery with poor exhaust and making nuisance for community will not be allowed to work on-site.

2.14. Manpower Requirement

It is estimated that the labor of 15-20 persons will be required by the Contractor for the installation of 03 tube wells. No child labor will be hired and verification will be made through CNIC. 95% of labor shall be hired locally that will return to their homes on daily basis.

2.15. Existence of Utility Services within RoW

There is no existence of Sui gas, water supply and fiber optic lines within RoW of proposed sites for installation of tube wells except for proposed new supply lines where electric poles and other utilities also exist within RoW. Contractor will take precautionary measures to nullify damage to other utility services and manage its construction activities accordingly. Contractor is liable to compensate any damage to any utility.

2.16. Vegetation Removal/ Tree Cutting

Although trees are present at the site where tube-wells are to be installed, but there will be no removal of vegetation/ trees cutting within RoW during the course of Sub-project as enough space is available to install the tube-wells by conserving the trees.

2.17. Sub-project Alternatives

Sub-project involves installation of 03 Tube Wells, rehabilitation of 03 OHRs and laying of new water supply lines which become chaos for MC staff during its operation as the older ones have become inefficient with the passage of time, no land acquisition is required; no dismantling of any public structures; and no direct impact to any socially or environmentally sensitive receptors; Based on this environmental and social assessment, it is established that the Sub-project will cause low to moderate environmental and social manageable impacts. Consequent to this assessment alternatives for the Sub-projects were not practical. Project will benefit the local community creating job opportunities as well as it will solve long-standing issue of water supply shortage and absence in densely populated areas.

2.17.1. Site Alternative

Sub-project involves installation of 03 Tube Wells, rehabilitation of 03 OHRs and laying of new water supply lines in Khanewal city, so there is no site alternative envisaged because the older facilities have become inefficient and are creating chaos for the community.

2.17.2. Design Alternative

Sub-project will cover installation of 03 Tube Wells, rehabilitation of 03 OHRs and laying of new water supply lines in Khanewal city, with no design changes envisaged. Therefore, no design alternative can better sever the purpose in this context.

2.17.3. Scope of Work Alternative

Sub-project scope of work involves installation of 03 Tube Wells, rehabilitation of 03 OHRs and laying of new water supply lines in Khanewal city. Scope of work has been improved with inclusion of suitable materials to get enhanced quality of infrastructure. Hence, scope of work is limited as per requirements under the Sub-project and no other alternative can be practical.

Section-3 Legal & Policy Framework

3.1. Introduction

The Government of Pakistan and Government of Punjab (GOP) have enacted a range of laws, regulations, policies and procedures for management and mitigation of social and environmental impacts for infrastructure development projects. This chapter discusses the federal, provincial and local policies and laws and WB policies and principles applicable for PCP to deal with the environmental and social issues.

3.2. Policy & Regulatory Review of Social Aspects

Several laws, regulations, procedures, and technical guidelines have been developed at the federal and provincial levels to address key social risks. The legal framework includes legislation addressing land acquisition, social analysis as part of the EIA, and labor protections among many others. The most important of these overarching laws and regulations related to the social aspects of the program include the following:

3.2.1. National and Provincial Policies

- Punjab Labor Policy, 2018
- Pakistan Labor Policy, 2010

3.2.2. National and Provincial Laws, Regulations, Procedures and Guidelines

- Punjab Environmental Protection Act 2012
- Punjab Local Government Act, 2019
- Pakistan Antiquities Act 1975 and Punjab Antiquities Act, 2012
- Punjab Restriction of Employment of Children Act 2016
- Protection Against Harassment of Women at the Workplace Act, 2010
- Guidelines for Public Consultation, 1997

3.3. Policy & Regulatory Review of Environmental Aspects

There is a long list of federal and GoP policies and legislations that are relevant to PCP. The following criteria have been used for the selection of relevant legislations that can best describe the counterpart's system for addressing and managing the program risks:

- Federal and GoP environment and climate change policies

Environment & Social Management Plan (ESMP)

- Sector-specific GoP policies that are linked to PCP objectives and intervention activities
- Federal and GoP environmental protection Acts
- Legislations of target sectors and subsectors relevant to PCP objectives and risks and at the same time, provide relevant environmental instructions. The focus of the review is to describe the counterpart's system for managing the environmental risks attached to PCP interventions.

3.3.1. Policy Framework

Following is the list of important policies relevant to environmental management of PCP:

- Pakistan Climate Change Policy, 2012
- National Sanitation Policy, 2006
- Punjab Sanitation Policy, 2015
- Punjab Urban Water and Sanitation Policy, 2007

3.3.2. National and Provincial Laws, Regulations, Procedures and Guidelines dealing with the Environmental Aspects

Table 3-1: National and Provincial Laws, Regulations, Procedures and Guidelines dealing with the Environmental Aspects

Sr. No.	Applicable laws, regulations, Guidelines	Relevancy/Applicability
I.	Punjab Environmental Protection Act 2012	PEPA does not require IEE or EIA of rehabilitation projects
II.	PEPA Review of IEE/EIA Regulations, 2000	IEE/EIA regulations do not require IEE or EIA of rehabilitation projects.
III.	Notification No.SO (Tech)/EPD/1-26/2004 issued by Government of the Punjab, Environment Protection Department "Delegation of Powers for Environmental Approvals Rules 2017	According to Schedule I (p) of this notification, Water supply schemes/ water purification plants costing up-to Rs. 20.000 million, need to submit an IEE report to the Commissioner of relevant district to obtain approval. However, in this Sub-project, proposed budget for 05 new water supply lines is PKR 12.000 million Keeping in view the scope of work and nature of anticipated environmental and social impacts, under the preview of ESMF of PCP, current ESMP is prepared

Sr. No.	Applicable laws, regulations, Guidelines	Relevancy/Applicability
IV.	Punjab Local Government Act, 2019	Follows the environmental and social assessment procedures state in PEPA 2012
V.	Punjab Environmental Quality Standards for Motor Vehicle Exhaust and Noise	Applied to vehicles used by the contractor
VI.	Punjab Environmental Quality Standards for Ambient Air	Compliance required during construction activities
VII.	Punjab Environmental Quality Standards for Noise	Compliance required during construction activities
VIII.	Punjab Environmental Quality Standards for Water Quality	Compliance required before, during and after construction activities At the time of boring, contractor will ensure the water quality analysis and tube-wells will be installed only if the report shall comply with the PEQSS

Sub-project doesn't fall in any schedule of IEE/EIA project categories; thus, it doesn't require any NOC from EPD.

3.4. World Bank Policy Core Principles and Applicability on Sub-project

Core Principles	Applicability
<p>Core Principle 1 Environmental and social management procedures and processes are designed to</p> <ul style="list-style-type: none"> (a) Avoid, minimize, or mitigate against adverse impacts; (b) Promote environmental and social sustainability in program design; and (c) Promote informed decision making relating to a program's environmental and social effects. 	<p>ESMP prepared under the light of this Principle in order to mitigate negative impacts envisaged in this Sub-project. ESMP implementation will help in achieving environmental and social sustainability</p>
<p>Core Principle 2 Environmental and social management procedures and processes are designed to avoid, minimize, and mitigate against adverse effects on natural habitats and physical cultural resources resulting from the program</p>	<p>Table 8-1 prepared to mitigate all minor impacts anticipated during the course of the Sub-project.</p>
<p>Core Principle 3 Program procedures ensure adequate measures to protect public and worker safety against the potential risks associated with (a) construction and/or operations of facilities or other operational practices developed or</p>	<p>All the mitigation measures have been incorporated in the Table 8-1 to address risks associated with workers and community health and safety. Contractor will ensure compliance with these attributes.</p>

Core Principles	Applicability
promoted under the Program and (b) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials	
Core Principle 4 Land acquisition and loss of access to natural resources are managed in a way that avoids or minimizes displacement, and affected people are assisted in improving, or at least restoring, their livelihoods and living standards	This core principle doesn't trigger in this Sub-project as no land acquisition is required during the replacement of existing sewer-line.
Core Principle 5 Due consideration is given to cultural appropriateness of, and equitable access to, program benefits, giving special attention to rights and interests of indigenous peoples and to the needs or concerns of vulnerable groups.	No indigenous/ Vulnerable groups exist in the Sub-project sites.
Core Principle 6 Avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.	This principle doesn't trigger in this Sub-project.

3.4.1. World Bank Environmental, Health and Social Guidelines

The principal World Bank publications that contain environmental and social guidelines are listed below.

- Environment, Health, and Safety (EHS) Guidelines prepared by International Finance Corporation and World Bank in 2007
- Pollution Prevention and Abatement Handbook 1998: Towards Cleaner Production
- Environmental Assessment Sourcebook, Volume I: Policies, Procedures, and Cross-Sectoral Issues.
- Social Analysis Sourcebook
- WB Group Gender Strategy

Details of related EHSG can be found in Annex II.

3.4.2. COVID-19 SOPs

During the construction and implementation of the Sub-project, the Standard Operating Procedures (SOPs) will be strictly followed during construction activities, stakeholder consultations or applicable in any other relevant aspect. The SOPs attached as Annex-III.

Section-4 Environment & Social Baseline

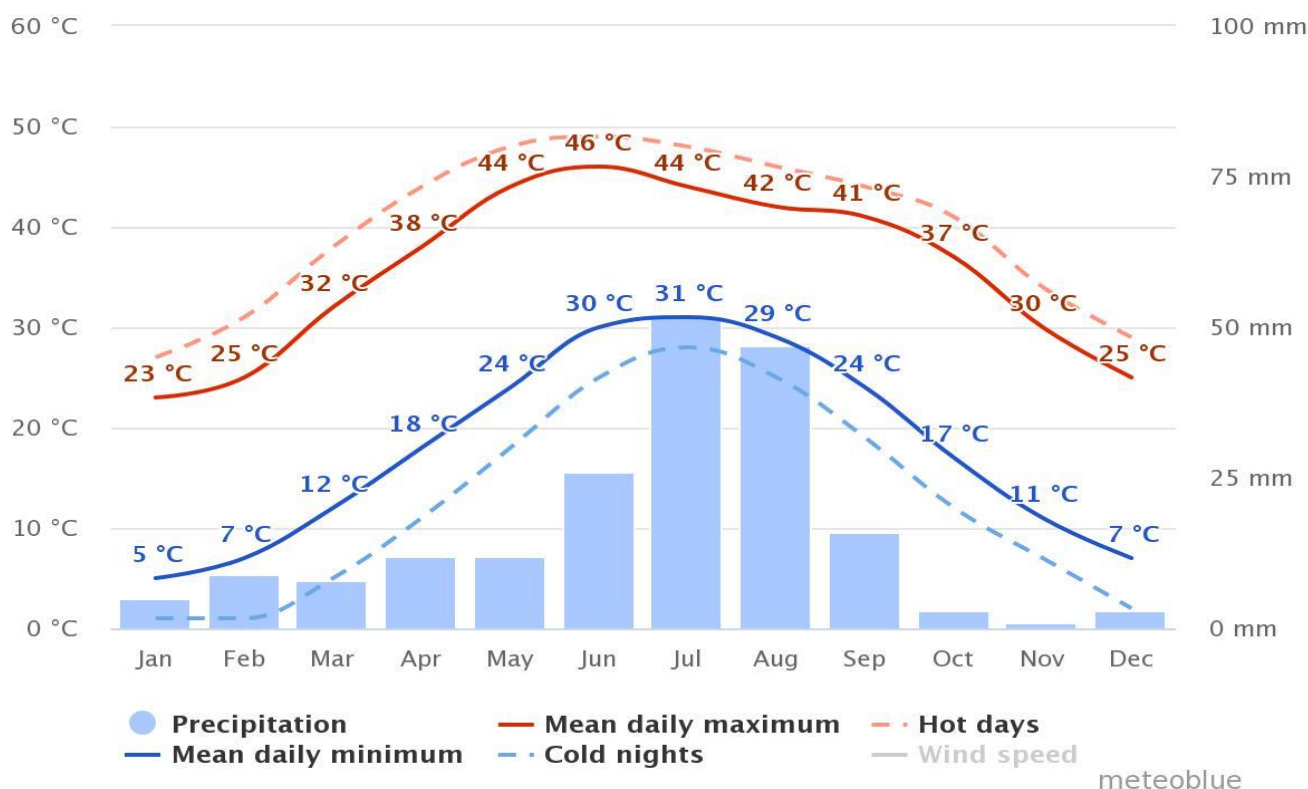
4.1. City profile

Khanewal is located at 30°-18' North and 71°-55' East with an altitude of 135 meters above mean sea level at a distance of 45 Km in North East of famous city of Multan. It is located on the main arterial highway N-5 of the country and hence connected to all cities of Pakistan through road and rail links. The Khanewal city area is 784 sq.km. The name Khanewal was named after the earliest settlers here who belonged to the caste 'Daha' and used 'Khan' in their names. After construction of irrigation system and rail track in Khanewal it became the commercial center having grain markets and other commercial activities.

4.2. Climate

Located at an elevation of 135.38 meters (444.16 feet) above sea level, Khanewal has a Subtropical desert climate (Classification: BWh). The district's yearly temperature is 31.79°C (89.22°F) and it is 10.9% higher than Pakistan's averages. Khanewal typically receives about 22.74 millimeters (0.9 inches) of precipitation and has 48.64 rainy days (13.33% of the time) annually. The "mean daily maximum" (solid red line) shows the maximum temperature of an average day for every month for Khanewal. Likewise, "mean daily minimum" (solid blue line) shows the average minimum temperature. Hot days and cold nights (dashed red and blue lines) show the average of the hottest day and coldest night of each month of the last 30 years¹.

¹ https://www.meteoblue.com/en/weather/week/khanewal_pakistan_1174220



4.3. Demographic Status²

The present population of Khanewal is 2,920,233 at growth rate of 1.83. Sub-project area is residential cum commercial. Approximately 25,000 people live in the vicinity of the project. Sub-project is populated with middle class community.

4.4. Water Resources

The city is considered as a single unit or zone with respect to water supply. Deep ground water is fresh and hence the water supply system is based on deep tube-wells installed at various locations in the city. The Town is served by direct pumping in some areas whereas in some areas water is supplied to the consumers through overhead reservoirs.

Khanewal city is equipped with piped water supply system. Some of the areas are facing water shortage whereas some others have no water supply system. Water supply from shallow as well as deep aquifers over here have chemically fresh water but the shallow aquifers are mostly contaminated. Therefore; 03 Tube-wells including rehabilitation of 03 existing OHRs in Colony No. I, Peoples Colony and 3-Marla abadi near Khurram pura and laying of 05 new supply lines in Khanewal city needs to be done.

² <https://www.pbs.gov.pk/sites/default/files/population/2017/results/07201.pdf>

4.4.1. Water Quality

No specific primary and secondary data available in context of Khanewal City. MC Khanewal has not analyzed/ sample any drinking water since PHED handed over whole water supply infrastructure to MC. The water samples (number and location) were collected at source level and from downstream at end users' level, water quality analysis reports are attached with the ESMP.

Summary of Drinking Water Quality Samples Reports

The drinking water quality samples from tube wells, overhead reservoirs and tap water from houses were collected and analyzed by SGS lab. Total nine samples were collected by SGS representatives on 13th October, 2022 from different locations of the project area including People's Colony, Colony No. 01, 03 Marla Scheme, T-Chowk and Islam Park in Khanewal city. All the samples were analyzed according to the parameters defined in Punjab Environment Quality Standards (PEQS) for drinking water and the results are depicted in tables below:

A: Ground Water

The quality of ground water from tube wells is generally fit for drinking except for tube well at T-Chowk where the turbidity and total dissolved solids were above the permissible limit of PEQS. Biological analysis showed the contamination of Coliform bacteria in ground water from tube wells at T-Chowk and Colony No. 1 where installation of new tube-wells is proposed.

Table-I Results of Water Quality Analysis report for Samples Collected from Tube Wells

Sr. No	Parameters	Limit As per PEQS for Drinking water	Results of Ground Water Analysis from Tube Wells				
			Tube well People's Colony	Tube Well T-Chowk	Tube Well No. 17	Tube Well Colony No. 1	Tube Well No. 20
01	Turbidity	<5 NTU	03	9	4	2	4
02	pH @ 25°C	6.5—8.5	7.47	7.59	7.82	7.89	7.95
03	Color	<15 TCU	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
04	Solids, Total Dissolved (TDS)	<1000	928	1284	673	761	714
05	Total Hardness	<500	348	392	192	200	214
06	Alkalinity, Total as CaCO ₃	--	256	340	180	224	210
07	Nitrate, Nitrogen (NO ₃)	<50	<1.0	<1.0	<1.0	<1.0	<1.0
08	Carbonates	--	<1.0	<1.0	<1.0	<1.0	<1.0
09	Hardness, Bicarbonates	--	92	52	12	<1.0	4
10	Sulfate (SO ₄)	--	266.71	549.07	249.84	288.53	159.698
11	Chloride	<250	94.60	136.00	57.15	53.21	46.31
12	Conductivity, Electrical	--	1517	2057	1005	1171	1022

Environment & Social Management Plan (ESMP)

13	Fluoride	<1.5	<1.0	<1.0	<1.0	<1.0	<1.0
14	Arsenic	<0.05	0.007	0.048	<0.005	0.035	0.039
15	Iron	--	0.068	0.011	0.025	0.023	0.046
16	Sodium	--	102.00	279.00	141.00	181.00	260.00
17	Potassium	--	9.78	14.10	16.70	11.01	13.60
18	Calcium	--	21.70	67.40	67.50	57.20	69.90
19	Magnesium	--	14.20	35.86	31.59	24.42	36.21
20	Total Coliform	0 CFU / 100ml	Absent	84	Absent	73	Absent
21	Fecal Coliform	0 CFU / 100ml	Absent	Absent	Absent	41	Absent

B: Overhead Reservoirs (OHRs)

The water quality of OHR is given in Table-II, which shows that turbidity and total dissolved solids are above permissible limit in water sample taken from OHR of T-Chowk, all other parameters are within the drinking water standard limit and are fit for drinking. Biologically the Coliform bacteria was present in the water sample taken from People's Colony OHR.

Table-II Results of Water Quality Analysis report for Samples Collected from OHRs

Sr. No	Parameters	Limit As per PEQS for Drinking water	Results of Water Analysis from OHRs	
			OHR People's Colony	OHR T-Chowk
01	Turbidity	<5 NTU	04	8
02	pH @ 25°C	6.5—8.5	7.76	7.70
03	Color	<15 TCU	< 5.0	< 5.0
04	Solids, Total Dissolved (TDS)	<1000	878	1250
05	Total Hardness	<500	356	388
06	Alkalinity, Total as CaCO ₃	--	252	336
07	Nitrate, Nitrogen (NO ₃)	<50	<1.0	<1.0
08	Carbonates	--	<1.0	<1.0
09	Hardness, Bicarbonates	--	104	52
10	Sulfate (SO ₄)	--	391.84	529.72
11	Chloride	<250	110.37	130.08
12	Conductivity, Electrical	--	1516	2065
13	Fluoride	<1.5	<1.0	<1.0
14	Arsenic	<0.05	0.020	0.018
15	Iron	--	0.020	0.024
16	Sodium	--	179.00	255.00
17	Potassium	--	7.43	13.30
18	Calcium	--	36.60	69.40
19	Magnesium	--	17.49	36.30
20	Total Coliform	0 CFU / 100ml	58	Absent
21	Fecal Coliform	0 CFU / 100ml	Absent	Absent

C: Tap Water

The Tap water results are given in Table-III and results show that drinking water used by residents of 3 Marla Scheme, and Islam Park is good for drinking purposes except for slightly high turbidity in Islam Park water. Coliform bacteria was also found in the tap water of Islam Park.

Table-III Results of Water Quality Analysis report for Samples Collected from Tap Source

Sr. No	Parameters	Limit As per PEQS for Drinking water	Results of Water Analysis from Tap	
			3 Marla Scheme W Block Tap water	Islam Park Tap water
01	Turbidity	<5 NTU	3	2
02	pH @ 25°C	6.5—8.5	7.68	7.63
03	Color	<15 TCU	< 5.0	< 5.0
04	Solids, Total Dissolved (TDS)	<1000	934	1252
05	Total Hardness	<500	324	396
06	Alkalinity, Total as CaCO ₃	--	216	336
07	Nitrate, Nitrogen (NO ₃)	<50	<1.0	<1.0
08	Carbonates	--	<1.0	<1.0
09	Hardness, Bicarbonates	--	108	60
10	Sulfate (SO ₄)	--	413.24	540.84
11	Chloride	<250	112.34	139.94
12	Conductivity, Electrical	--	1589	2069
13	Fluoride	<1.5	<1.0	<1.0
14	Arsenic	<0.05	0.032	0.021
15	Iron	--	0.047	0.10
16	Sodium	--	106.00	178.00
17	Potassium	--	5.88	14.38
18	Calcium	--	31.50	64.60
19	Magnesium	--	16.74	31.45
20	Total Coliform	0 CFU / 100ml	Absent	39
21	Fecal Coliform	0 CFU / 100ml	Absent	Absent

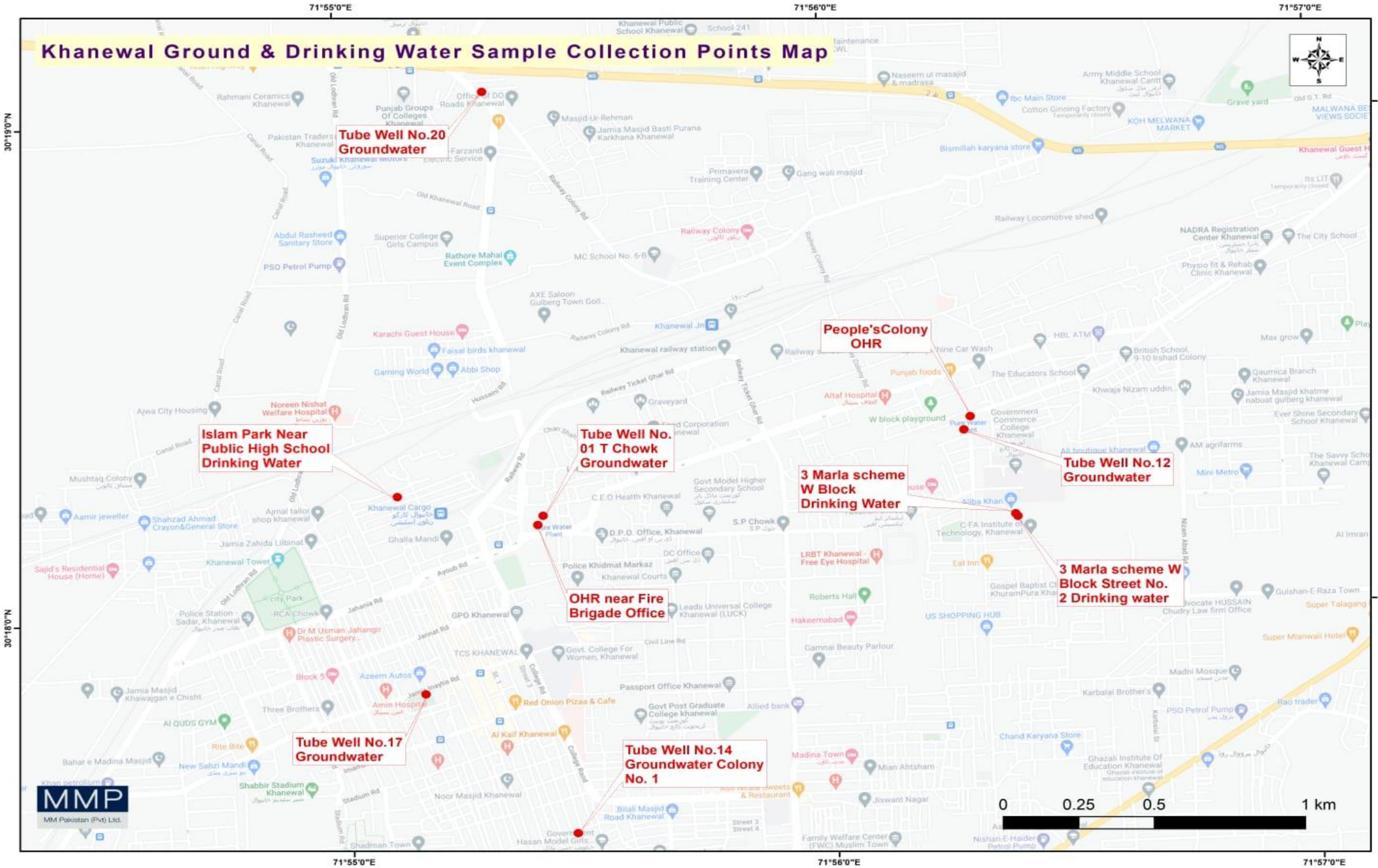
Overall, the results show that the quality of water samples collected from ground, OHR and Tap sources is generally fit for drinking purposes with slightly increased Turbidity and Total Dissolved Solids (TDS). The biological analysis revealed that Coliform bacteria contamination was detected in water samples taken from four sources i.e Tube-well T Chowk, Tube-well Colony No.1, OHR of Peoples Colony and Islam Park Tap water (for tube-wells samples, samples were taken from water filtration plants where new tube-wells are proposed to be installed) which may cause gastrointestinal infections to the residents of these areas. Those filtration plants were installed 5 years ago and due to lack of chlorination mechanism, contamination was identified in test reports. However, to ensure the water quality supply as per permissible limits of PEQs, analysis will be made at the time of tube-wells boring before the installation and installation will be made only if the water quality analysis will come under

Environment & Social Management Plan (ESMP)

permissible limits of PEQs and after installation and chlorination mechanism will be strictly applied by the MC.

Water Quality Analysis reports are attached as Annexure VII.

Khanewal Ground & Drinking Water Sample Collection Points Map



4.5. Water Supply System

The existing water supply system in Khanewal City is based on groundwater (deep tube-wells). At present, there are about 11 tube-wells in the city out of that 7 are operational. The depth of water table in the city ranges from 100 ft. to 110 ft. In North zone, maximum daily water abstraction is about 0.54 MGD, while in south zone, maximum water abstraction is about 2.79 MGD. The Depth of tube-wells ranges between 380 to 400 feet. The installed tube-wells are of capacities ranging from 1.0 to 2.0 cusecs.

4.5.1. Service Delivery Level

- The existing 02 tube-wells in the said areas of Colony No.1 and Peoples Colony were installed in 1983 and 1992 respectively and are more than 30 years old. The tube-wells strainers, column pipes etc. had badly damaged/ rusted and need complete replacement besides the pumping machinery etc. The 3rd tube-well is new and to be installed under this project for benefitting the area of 3-marla abadi near Khurrampura.
- The Sub-project will overcome the issues of water shortage, and after completion of this project whole city will be supplied with adequate and clean drinking water. O & M charges will be reduced due to new infrastructure.
- Reduction and prompt redressal of the public complaints regarding shortage of water supply.

4.6. Seismologic Zone

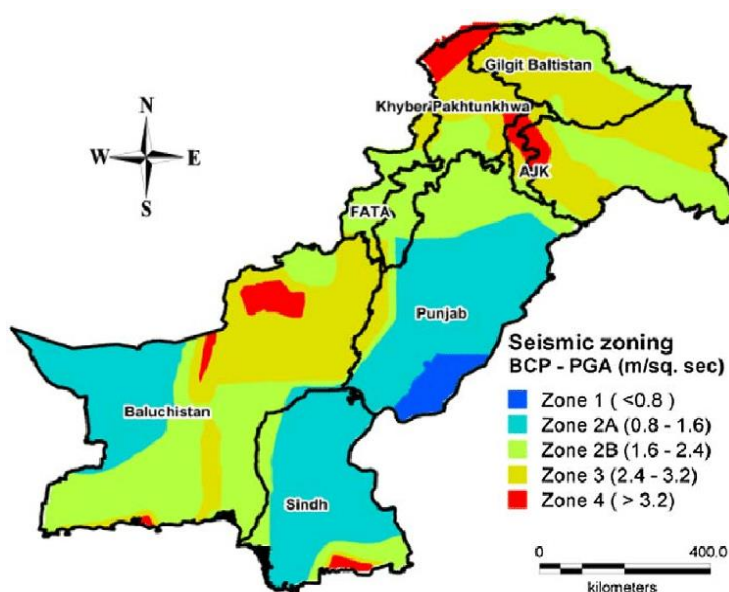


Figure 4-1: Project Area Seismic Zone Location³

³ Source: Geological Survey of Pakistan

Table 4-1: Seismic Zones of Tehsils of Pakistan

Tehsil	Seismic Zone	Tehsil	Seismic Zone	Tehsil	Seismic Zone
Punjab					
Attock	2B	Shorkot	2A	Multan City	2A
Hassanabdal	2B	Toba Tek Singh	2A	Multan Saddar	2A
Fateh Jang	2B	Khanewal	2A	Shujabad	2A
Pindi Gheb	2B	Gojra	2A	Jalapur Pirwala	2A

According to the Seismic data of Pakistan; Khanewal lies in 2A zone, its Peak Ground acceleration is (PGA range is 0.08-0.16g) with minimum risks to any earthquakes⁴.

4.7. Natural Disasters Data

Geographically Khanewal city lies at a distance of 34 Km and 40 Km from River Ravi and Chenab respectively and is therefore historically not affected by floods.

4.7.1. Potential hazards of the District Khanewal

Table 4-2: Risk Analysis of Potential Hazards of District Khanewal

Hazards Risk	Likelihood Score (1-5)	Impact Score (1-5)	Risk
Floods	3	3	6
Urban Flooding	1	1	1
Flash Floods	0	0	0
Hill Torrent	0	0	0
Glacial Lake Outburst Flood (GLOF)	0	0	0
Landslide	0	0	0
Tornado	1	1	1
Earthquake	1	4	4
Drought	1	3	3
Epidemic	3	3	6
Fire Incidents	2	3	6
Other Major Accidents (Building Collapse, road traffic accidents, train accident, Stampede, plane crash)	1	4	4
Environmental Hazards (industrial accidents, severe pollution etc.)	1	3	3
Risk = Impact x Likelihood Low: 1-7 Medium: 8-14 High: 15-25			

Source: District Disaster Management Plan 2020 (District Khanewal)

⁴ Source: Geological Survey of Pakistan

4.8. Environmentally Sensitive Receptors

Environmental sensitive areas are more prone towards human disturbance. For this Sub-project, no wetland, estuarine, river, protected areas lie within scope of work of scheme area and no significant environmental impacts has been envisaged, however mitigation measures have been recommended against less significant environmental concerns.

4.9. Flora & Fauna

About 30 trees of Sufaida, Bakain, Sukhchain, Sohanjana, Toot, and Sumbal are growing in area of Colony No.1 where one tube-well has to be installed. Similarly, about 35 trees of same species are present at site for tube-well in Peoples Colony where another tube-well has to be installed. No wild animal/ endangered species are found in the area. No tree cutting is involved during the execution of the project.

4.10. Socially Sensitive Receptors

There is an educational institute i.e. Govt. Hassan Model Girls School near Colony No.1 and The Educators School near People's Colony sites where new tube wells are to be installed and rehabilitation works of OHRs are to be performed. Both sensitive receptors are located outside the RoW and Corridor of Impact (Col) of the project and movement and educational activities of students/ commuters across the project sites will not be affected. A Christian graveyard is also present near new proposed supply lines for 3 Marla housing scheme, but no direct impact is anticipated within Corridor of Impact (Col) of 10 meters of the project site. One mosque is present within 100 meters but outside the RoW of OHR to be rehabilitated at Health Colony, where great caution will be observed to reduce impact on people performing their religious activities. From Chungi chowk to Sabbier Stadium Road alignment, for laying of new supply line there is one mosque, which is outside the Col and at the same location, tuff paver (almost an area of 172 square ft), outside the Al-Rehman Petrol Pump at MC RoW, needs to be removed for laying of supply lines which will be restored to the same position after construction work



Fig 4-1: Tough Paver outside the petrol pump which will be restored by the contractor after construction work of new water supply line

4.11. Land Use

The land of Sub-project is under possession of executing body i.e. MC Khanewal and is currently used for the purpose of water supply installations. Major land use of the area is residential cum commercial. Sub-project involves installation of 03 tube wells, rehabilitation of 03 OHRs and laying of new supply lines (along the MC owned main roads and in the middle of small streets) therefore no land acquisition is required.

Section-5 Stakeholder Consultation

Timely and broad-based stakeholder involvement is an essential element for an effective environmental and social assessment. Stakeholder engagement during Environmental & Social Assessment contributes in the improvement of the project design, environmental compliance and social acceptability.

5.1. General

This section describes the outcomes of the public consultation sessions held with the community of the proposed project area that can be affected by the project. The objectives of this process were to:

- Share information with stakeholders on the rehabilitation of the proposed project and expected impacts on the physical, biological and socio-economic environment of the project;
- Understand stakeholder's concerns regarding various aspects of the project and the likely impacts of construction related activities and operation of the project;
- Understand the perceptions, assessment of social impacts and concerns of the affected people/ communities of the proposed project;
- Provide an opportunity to the public regarding their valuable suggestions in a positive manner; and
- Reduce the chances of conflict through the early identification of controversial issues, and consult them to find acceptable solutions.

In preparation for the ESMP, two major groups of stakeholders were identified:

- Local communities who are the direct beneficiaries of the project interventions and or those who may be affected temporarily due to proposed project activities and therefore identified as the primary stakeholders.
- Institutions who have an important role in enabling the realization of the project interventions and therefore identified as the secondary stakeholders.

5.1.1. Primary Stakeholders

The Sub-project area is residential cum commercial and serve as major connectivity between Mohallas. Sub-project area inhabitants are direct beneficiaries of project interventions as it will resolve their long-standing issue of their vicinity.

5.1.2. Secondary Stakeholders

The Sub-project area lies in the jurisdiction of MC Khanewal and MC has an ambit of providing sanitary services to the citizens. Public has reported about the shortage of water supply and MC staff tried to resolve it many times through improvement of infrastructure of municipal services for water supply. The tube-wells strainers, column pipes etc. had badly damaged/ rusted and needed complete replacement besides the pumping machinery etc. MC top management decided to install 03 new tube wells, rehabilitate 03 OHRs and lay new water supply lines and worked on the formulation of PC-I to provide better water supply facilities to the public.

5.1.3. Disclosure of Sub-project Information

The Sub-project ESMP will be uploaded on the project websites, hard copies shall be sent to all institutional stakeholder's offices. The Sub-project ESMP will be disclosed internally within the Bank. Before start of physical works on the subproject, the Sub-project ESMP will be thoroughly briefed to the Contractor to implement ESMP provisions in its letter & spirit. Contractor will keep copy of ESMP on the site and will also brief his labor about its attributes. PCP ESSs team also developed EHS SOPs for labor/workers and contractors and flexes to guide Contractor about HSE aspects required to be addressed during the construction phase. Contractor will also install project information boards on the project site.

5.1.4. Future Consultation Plan

The stakeholder consultation is a continuous process, and should be carried out throughout the life of project. The consultations carried out during the present ESMP stage and reported are essentially among the initial steps in this process. During the subsequent project phases as well, participation of the project stakeholders needs to be ensured. MC Supervision staff will ensure time to time consultation with locals to get their feedback on project activities and their related complaints.

5.2. Public Consultation at E&S Screening Stage

For public information/ consultation, visits were made in the proposed project areas on August 03, 2022 to record their concerns regarding Sub-project activities. Local community has been consulted about proposed project interventions during consultation process. Methodology

Environment & Social Management Plan (ESMP)

selected for selection of interviewee was Random Sampling/Focus Group Discussion. Figure 5-1 shows pictorial record of public and Institutional consultations.



Figure 5-1: Pictorial view of Public Consultation and Public Meetings

Points Raised by Stakeholders	ESMP Mitigation Measures
<p>In general public was in favor of the project and no one had any issue regarding project interventions.</p> <p>Some participants required to keep walk ways clear during construction activities. Overall, the public was happy as their long-standing issue of water shortage and clean water supply will be resolved.</p>	<ul style="list-style-type: none"> • In case of blockage of any walkway alternative routes will be provided • Appropriate signage near the construction activities will be displayed to sensitize the community and minimize accidents. • Public will be informed about project major activities, anticipated impacts and their proposed Mitigation Measures. • The contact Nos. of focal person of Grievance Redress Committee will be displayed at different locations and residents will also be informed about it. • Cleaning of sites upon completion of schemes. • Excess debris from the site be removed will immediately • The machinery and equipment with low noise (less than 65dB) will be used
<p>Consultation with owner of Al Rehman Petrol Pump was carried out on 18-10-2022 and he was informed about the temporary removal of tuff pavers at front of his petrol pump (171 square ft at MC RoW) which will be restored after construction work. He gave his consent.</p> <p>Issue: Customers accessibility during work may be affected.</p>	<ul style="list-style-type: none"> • After discussion with the Petrol Pump owner, it was revealed that customers rarely visit the petrol pump at early morning. MC will issue instructions to the contractor that construction activity in that portion should be carried out in early morning hours so that accessibility issue may not hinder the business of petrol pump.
<p>All stakeholders agreed with the replacement of existing tube wells. They appreciated the efforts of MC Khanewal for solving an important problem of the area</p>	



Fig 5-2: Public consultation with Petrol Pump Administration

List of consulted stakeholders is attached as Annexure IV.

5.3. Gender Consideration

No negative impact on any gender is envisaged; however, women/ transgender participation at any official or labor level should be encouraged during the course of the Sub-project. Contractor should not harass any gender at community level or other.

Section-6 Grievance Redress Mechanism

In order to receive and facilitate the resolution of affected people concerns, compliments, and grievance about the project's environmental and social performance an Environmental Grievance Redress Mechanism (GRM) has already been established. The GRM will address affected people's concerns and complaints proactively and promptly, using an understandable and transparent process that is gender responsive, culturally appropriate and readily accessible to all segments of the affected people at no costs and without retribution.

The Grievance Redress Mechanism (GRM) will be consistent with the requirements of the World Bank Core Principle "1.2f Responsiveness and accountability through stakeholder consultation, timely dissemination of program information, and through responsive grievance redress measures". Under Core Principle 1: "Environmental and social management procedures and processes are designed to:

- Avoid, minimize or mitigate adverse impacts;
- Promote environmental and social sustainability in program design; and
- Promote informed decision making relating to a program's environmental and social effects" to ensure mitigation of community concerns, risk management, and maximization of environmental and social benefits.

The overall objective of the GRM is therefore to provide a robust system of procedures and processes that provides for transparent and rapid resolution of concerns and complaints identified at the local level.

The GRM will be accessible to diverse members of the community, including women, senior citizens, and people with disabilities, laborers/ workers, and other vulnerable groups. Culturally appropriate communication mechanisms will be used at all Sub-project sites both to spread awareness regarding the GRM process as well as complaints management. *ESMF GRM will be integrated with the PCP's overall program GRM hotline to be developed by the Consultants under the scope of PCP.*

6.1. GRM AT SUB-PROJECT SITE

Grievance Redress Mechanism (GRM) is to provide a robust system of procedures and processes that provides for transparent and rapid resolution of concerns and complaints identified at the local level. For integration of GRM into existing Complaint Tracking System (CTS), Grievance Redress Committee (GRC) - MC will be notified under umbrella of Punjab Cities Program (PCP) comprising of the following members and TORs.

Environment & Social Management Plan (ESMP)

Chief Officer MC	Chairperson
Municipal Officer (Infrastructure Development)	Convener
Municipal Officer (Planning)	Member
Municipal Officer (Regulation)	Member

TORs of GRC-MC are as followed:

- ESFPs designated by the MCs for environmental and social management will be responsible to manage the GRM effectively. The ESFPs with the support of DPO-ESM will play an instrumental role in steering the GRC functions both at city and regional level.
- CO MC will be responsible to share monthly recorded grievances data with regional GRC.

6.2. GRM at Regional Level

Grievance Redress Committee at Regional level will also be notified under umbrella of Punjab Cities Program (PCP) comprising of the following members and TORs:

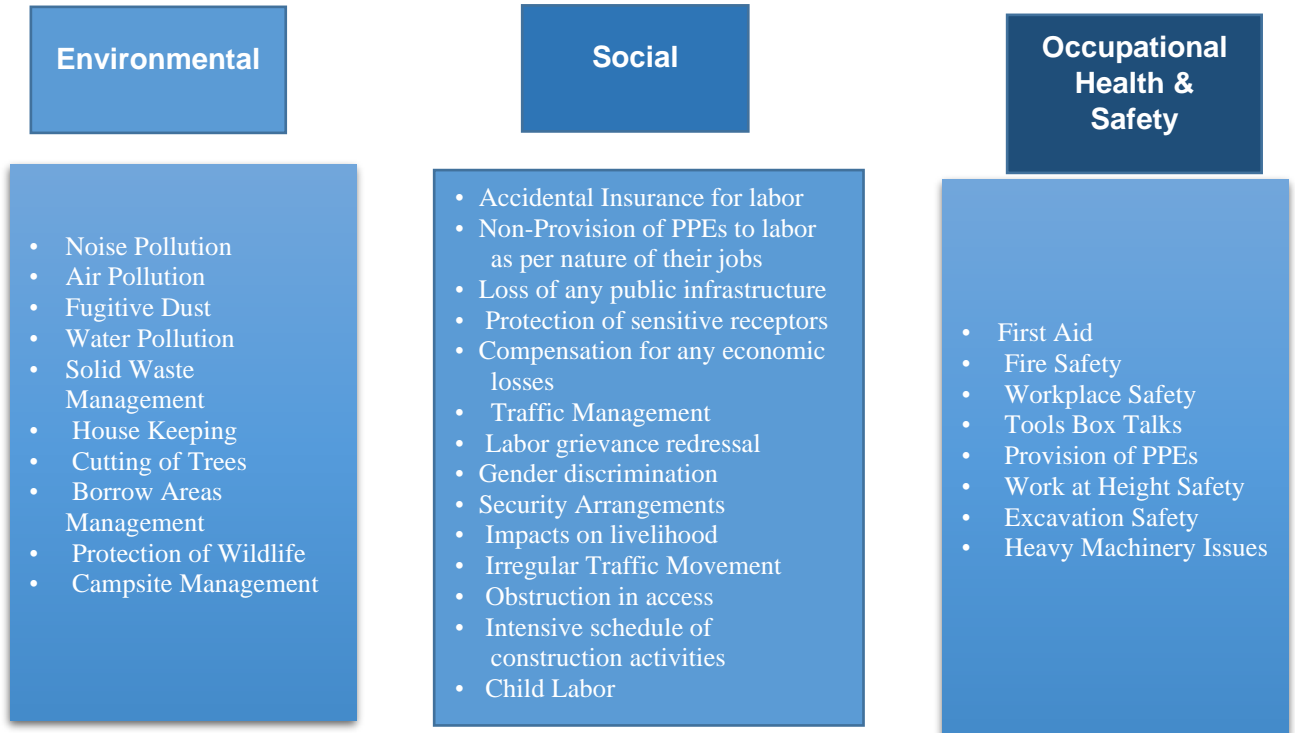
Deputy Program Officer (Environmental & Social Management)	Chairperson & Convener
Deputy Program Officer (Infrastructure Development)	Member
Deputy Program Officer (Institutional Strengthening)	Member

TORs of GRC-Regional are as followed:

- Committee will be responsible to manage the GRM effectively as per data provided by MC GRC.
- DPO-ESM will support ESFPs in steering the GRC functions both at city and regional level.
- DPO ESM will maintain monthly complaint records from ESFPs.

A Grievance Redress Committee (GRC- PMDFC/LG & CDD) will be responsible to oversee the overall functions of the GRM at a strategic level including monthly reviews. It will be headed by the Secretary LG &CDD.

6.2.1. Types of Grievances



Section-7 Impacts And Mitigation

The environmental and social safeguards screening checklist depicts that:

- The Sub-project will not require any land acquisition;
- The Sub-project will not involve any involuntary resettlement; and
- The Sub-project does not fall in any protected area, such as wildlife sanctuary, game reserve, or national park.

The Sub-project involves installation of 03tube wells, rehabilitation of 03 OHRs and laying of new water supply lines in Khanewal city. However, there may be low to moderate adverse environmental and social impacts due to pipe boring, dumping of construction material, dumping of earth material and minor excavation etc.

7.1. Labor & Community Health & Safety

Contractor will ensure implementation of on-site safety measures to protect community from any mishap/incident or accidents. Contractor will install safety signage to aware public about on-going construction activities (caution, safety, construction work in progress etc.). Contractor will also provide information about diversion routes (where necessary) with safety cautions/flagmen. Contractor will also provide personal protective equipment (PPEs) to workers as per nature of their jobs.

7.2. Construction Waste Management & Disposal

Following types of waste is expected to be generated:

7.2.1. Pipe Boring and Minor Excavation Material

Contractor will stockpile excavated earth material aside to be produced during the installation of tube wells and laying of new supply lines and will redress (re-use) it during refilling of the excavated area if recommended by the Engineer.

7.2.2. Waste Water Generation

During the installation of tube wells; waste water will be generated and required to be pumped and removed immediately at designated place of MC by the Contractor. Contractor will never accumulate stagnant water, which may become breeding site for Dengue larvae and a cause of nuisance for the community.

7.2.3. Construction Material

Contractor will never stockpile huge quantities of construction material (sand, aggregate, bricks etc.) in the working limits to reduce chaos in the area. Contractor will remove construction waste during installation of tube wells, repair of OHRs and laying of new supply lines and will dispose of on immediate basis. Contractor will submit construction waste management plan to MC for review and approval.

7.3. Zone of Impact

The Sub-project area lies within the boundary wall of existing tube well sites, which is MC owned land and proposed new supply lines will be installed in MC Row through residential and semi commercial and vacant areas. The zone of impact would be 10 meters in the periphery of the Sub-project. The construction activities are very much limited to reduce impact on the surrounding area and public.

7.3.1. Direct Impacts

- Sub-project will be of least hindrance in the movement of households of residential and commercial units and their transportation during its construction phase.
- Sub-project will generate loose earth material during Pipe Boring to install 03 tube wells and minor excavation activities (2-3 feet) for laying new supply lines which can generate construction waste and waste water problems temporarily till it will be reused or disposed of on daily basis.
- There may be noise generation and exhaust emissions during boring and material transport, which will be mitigated by using new and well-tuned machinery by the contractor.
- Safety issues for labor may arise during tube well installation, which will be mitigated by appointing skilled labor for the particular task and use of PPEs by labor during works.
- There may be risk of fall from height during repair of OHRs, where contractor will be required to provide safety harness and scaffolding with solid platform to safely perform rehabilitation works.
- Excavation of trenches may cause accidents particularly for children and elderly. Special attention will be given to remove irrelevant persons away from project site and install barricade and safety/ caution sign boards for the safety of local community.

Environment & Social Management Plan (ESMP)

- Mismanagement of construction activities/ materials & equipment may impact inhabitants along the Sub-project.
- Some portion of Sub-project i.e. 3 Marla Housing scheme, in such cases traffic disruption is anticipated or road closure may be required. This will be managed by providing alternate routes to the local people and planning construction activities in a manner that flow of traffic or commutation of people remains unaffected.

7.3.2. Indirect Impacts

There is an educational institute i.e. Govt. Hassan Model Girls School near colony no.1 and The Educators School near People's Colony sites where new tube wells are to be installed and rehabilitation works of OHRs are to be performed. Both sensitive receptors are located outside the RoW of the project and movement and educational activities of students/ commuters across the project sites will not be affected. A Christian graveyard is also present near new proposed supply lines for 3 Marla housing scheme, but no direct impact is anticipated within Corridor of Impact (Col) of 10 meters of the project site. One mosque is present within 100 meters but outside the RoW of OHR to be rehabilitated at Health Colony, where great caution will be observed to reduce impact on people performing their religious activities. From Chungi chowk to Shabbier Stadium Road alignment for laying of new supply line there is one mosque which is outside the Corridor of Impact (Col).

Section-8 Environmental and Social Management and Monitoring Plan

8.1. Objective

The purpose of Environmental and Social Management and Monitoring Plan (ESMMP) for replacement of existing sewer-lines is to ensure that all necessary identified measures have been adopted in order to protect the environment and social situations and to comply with country environmental legislation and applicable World Bank Core Principles. After the preparation of ESMF, PMDFC ESM Wing outlined site-specific ESMMP for the Contractors and executing agency. Environmental and social checklist was prepared by PMDFC ESM Wing with the help of the field teams and was used to assess the potential impacts of Sub-project on the basis of its scale/size, nature and significant negative impacts.

8.2. Mitigation Plan

The mitigation plan, being a key component of ESMP includes measures to mitigate potential negative impacts and enhance its positive impacts during construction phase of the Sub-project. The Contractor is responsible for implementation of ESMP with the co-operation of executing and implementing agencies and local community of the subproject.

8.3. Monitoring Plan

Monitoring Plan is also associated with mitigation plan during the different stages of the Sub-project. It ensures that mitigation measures are being effectively implemented. The monitoring of the Sub-project is very imperative for implementation of the ESMP. The ESFPs will carry out the monitoring at the field level on a continuous basis. The DPO ESSs will perform periodic monitoring during their site visits.

8.4. Monitoring Mechanism

Safeguards implementation monitoring is an essential tool for testing whether the adopted environmental and social management measures are meeting their stated objectives. Two complementary methodology approaches are being applied to monitor the proposed actions under the ESMP:

- **Compliance monitoring;** which checks whether the actions proposed by the ESMMP have been carried out by visual observation, photographic documentation and the use of checklists prepared for the ESMMP;

- **Effects monitoring;** which records the consequences of program activities on the biophysical and social environment; as applicable, these effects are repeatedly measured by applying selected indicators.

The plan also defines the monitoring mechanism and identifies a set of verifiable monitoring parameters to ensure that all proposed mitigation measures laid down in the ESMMP are completely and effectively implemented.

Monitoring will be carried out to ensure that the mitigation plans are regularly and effectively implemented. It will be performed at two levels. At the PMDFC, the environmental team will do ESMP compliance monitoring to ensure that the mitigation plans are being effectively implemented. At Contractor’s level, the Environmental monitoring checklist (Annex-VII) will be filled on weekly basis by their Environmental Manager.

8.5. Reports

The Contractor will submit weekly compliance monitoring checklist and PMDFC ESM Wing will submit quarterly and annual monitoring reports as well as a final report of the Sub-project based on safeguard implementation status. The monitoring reports will also include process and outcome of consultations with the Project Affected Persons if any. The distribution of periodic reports is given below:

Distribution of Periodic Reports Report	Prepared by	Reviewed by	Distribution
Weekly	Contractor	PMDFC DPO ESM	PMDFC ESM team
Quarterly	MC with the support of PMDFC DPO ESM	PMDFC SPO ESM	The World Bank
Annual	MC with the support of PMDFC DPO ESM	PMDFC SPO ESM	The World Bank
Final	MC with the support of PMDFC DPO ESM	PMDFC SPO ESM	The World Bank

8.6. Inclusion of ESMP In Bidding/ Contract Documents

The present ESMP will be included in the bidding/ contract documents and their implementation will be a contractual binding for the Contractors. In addition, the Contractor's guidelines prepared by PMDFC/ safeguards procedures will also be made part of contractual agreement.

8.7. Monitoring of Environmental and Social Non-Compliance

Any environmental and social non-compliance during first half of the reporting month will be considered as a "minor deviation". In case the non-compliance attains the status of "non-mitigation" during the second half of the reporting month, it would be considered a "moderate non-compliance". In case non-compliance continues in the second month, it will fall in the category of "undone" and as such would be considered as a major non-compliance and eventually leading to serious punitive action including the suspension of Contractor's payment or any other penalty as may be considered appropriate with the recommendation of the DPO ESSs/Engineer. No payment will be made to Contractor against non-compliance and no arrears will be paid thereof.

8.8. Environmental and Social Management and Monitoring Plan

The impacts, mitigation measures, monitoring indicators, frequency and responsibility has been discussed in Environmental and Social Management and Monitoring Plan (ESMMP).

Table 8-1: Environmental & Social Management & Monitoring Plan

Sub-project: Installation of 03 Tube-wells with Rehabilitation of 03 Overhead Reservoirs & Laying of Water Supply lines, in Khanewal City

Proposed Sub-project activities	Potential Environmental/Social Impacts	Magnitude of Impact	Mitigation Measures	Mitigation Implementation Responsibility	Monitoring Indicators	Monitoring Frequency	Monitoring Responsibility
A-Design Phase							
Design and need of Project	Conflict on design	Negligible	To avoid conflicts at design phase PMDFC technical staff, MC and community representatives were consulted. It was confirmed from MC that the area is residential and no industrial pump is found in proposed subproject area. Existing pumps have been redundant therefore it is ensured that overexploitation and pumping of water resources is not anticipated. At design phase for water quality analysis, samples were taken from water filtration plants where new tube-wells are proposed to be installed) it may carry biological contamination. However, to ensure the water quality at per permissible limits of PEQs, analysis will be made at the time of tube-wells boring and installation will be carried out only if the water quality may come under permissible limits of PEQs and after installation and	MC ESFPs Design & E&S consultants	Consensus on the design	At Planning and Design stage and then throughout the length of sub-project	Design and ESM team of PMDFC

Proposed Sub-project activities	Potential Environmental/Social Impacts	Magnitude of Impact	Mitigation Measures	Mitigation Implementation Responsibility	Monitoring Indicators	Monitoring Frequency	Monitoring Responsibility
			chlorination mechanism will be strictly applied by the MC.				
B-Construction Phase							
<ul style="list-style-type: none"> • Installation of 03 new Tube-wells • Laying of 05 new water supply lines • Rehabilitation of 03 OHRs 	Land Acquisition and existing land use	Negligible	<ul style="list-style-type: none"> • All the 03 new tube-well will be installed at MC owned land • At one site where 01 new tub-well has to be installed, at current, there is 01 OHR (for rehabilitation) and 01 old tube-well and no land acquisition will be required. There are 30 tress/plants of various species which inside the boundary wall which will not be affected as sufficient space is available in the surroundings. • At second site where 01 tub-well has to be installed, there are almost 35 trees of Sufaida, Bakain, Sukhchain, Sohanjana, Toot, and Sumbal are present at site inside the boundary wall. However, tress will not be affected and no need to cut as the new tube-well will be installed at vacant place • At third site where 01 new tube-well will be installed, there is 01 OHR and its MC owned land with redundant boundary wall 	MC ESFPs, Contractor and contractor's team	Ensure the restoration and compensation (if required)	Throughout the length of sub-project	DPO-ESM PMDFC ESM team

Environment & Social Management Plan (ESMP)

Proposed Sub-project activities	Potential Environmental/Social Impacts	Magnitude of Impact	Mitigation Measures	Mitigation Implementation Responsibility	Monitoring Indicators	Monitoring Frequency	Monitoring Responsibility
			<ul style="list-style-type: none"> For laying of water supply lines, MC owned RoW will be used passing along the main roads and in the middle of streets of the residential areas. 				
Dismantling, Excavation, and filling operations	Environmental Issues: <ul style="list-style-type: none"> Dust Noise from machineries/equipment Contamination of surface water Vibration (Shock waves can be produced due to construction machinery work) Solid waste/pipe cuttings/sludge may be generated due these activities Safety hazards to 	Medium	<ul style="list-style-type: none"> Excavated waste will be disposed within 24 hours at designated place of MC. Updated and tuned machinery will be used to control noise. Water sprinkling will be carried out at consecutive intervals as per instruction Removal of excess matter/ debris/ waste water from the site within 24 hours. Provide PPEs (See Annex-VI). Provide appropriate signage near the construction activities to sensitize the community and minimize accidents. Local residents will be informed about project major activities, duration of scheme, time and schedule, anticipated impacts and their proposed Mitigation Measures. The contact Nos. of focal person of Grievance Redress Committee will be displayed at 	Contractor	Visual/ Photographic record, Public consultation, Environment Quality Analysis reports, GRM Complaints record	<ul style="list-style-type: none"> Daily site visit during construction phase Fortnightly/ weekly Once during the construction phase 	<ul style="list-style-type: none"> ESFPs DPO ESM Supervision Consultants E&S team

Proposed Sub-project activities	Potential Environmental/Social Impacts	Magnitude of Impact	Mitigation Measures	Mitigation Implementation Responsibility	Monitoring Indicators	Monitoring Frequency	Monitoring Responsibility
	<p>labor and nearby resident population.</p> <ul style="list-style-type: none"> Worse House Keeping <p>b) Social Issues:</p> <ul style="list-style-type: none"> Solid waste may cause disturbance in mobility Temporary blockage of road may restrict mobility Conflict with public and public complaints Economic losses Livelihood's loss. loss of shopkeepers Temporary loss of 		<p>different locations and residents will also be informed about it.</p> <ul style="list-style-type: none"> Construction work will be done with in the boundary wall of the area which belongs to MC. In this way the business of the shop keepers will not be affected. No damage to potential economic losses, livelihood disturbance, loss/damage of assets and loss of accessibility. Contractor will make sure that labor must not damage the property and structures of the residents. If there will be any PCR found during excavation; Contractor will follow guidelines (Annex-VIII) of chance find procedure. 				

Proposed Sub-project activities	Potential Environmental/Social Impacts	Magnitude of Impact	Mitigation Measures	Mitigation Implementation Responsibility	Monitoring Indicators	Monitoring Frequency	Monitoring Responsibility
	structures and private property <ul style="list-style-type: none"> • Economic loss of permanent and mobile vendors due to obstruction of passage • Presence of Physical Cultural Resources (PCRs) of Archeological importance 						
Civil work, Laying of water supply lines/network	Environmental Issues: <ul style="list-style-type: none"> • Earth material • Noise and vibration disturbances to residents and businesses • Road side visibility can be reduced and dusty environment 	Medium	<ul style="list-style-type: none"> • Transport the accumulated construction waste to a site identified by the implementing MC • Removal of excess materials or use as construction material with the approval of the Engineer. • Cleaning of sites upon completion of schemes. • Establish schedule and others specific restrictions • Limit work to day light hours as possible 	Contractor	Visual/Pictures	<ul style="list-style-type: none"> • Daily site visit during construction phase • Fortnightly/ Weekly • Once during the construction phase 	<ul style="list-style-type: none"> • ESFPs • DPO ESM • Supervision Consultants E&S team

Proposed Sub-project activities	Potential Environmental/Social Impacts	Magnitude of Impact	Mitigation Measures	Mitigation Implementation Responsibility	Monitoring Indicators	Monitoring Frequency	Monitoring Responsibility
	<p>leads to respiratory diseases.</p> <ul style="list-style-type: none"> • Safety issues • Health problems or immediate risk may take place • Spillage of fuel and oil • Traffic jams and congestion may take place and cause inconvenience to the people where the construction of interchanges will take place. • Worse House Keeping <p>Social Issues:</p> <ul style="list-style-type: none"> • Reduced pedestrian access to residences and businesses 		<ul style="list-style-type: none"> • Use of less noise generating equipment • Regular water sprinkling with the help of water bowsers • Cordon off construction area • Contractor will ensure provision of appropriate housing, water supply, and sanitation facilities to construction labor. • PPEs (See Annex-VI) will be provided to workers • Availability of safe drinking water and food for the workers. • For removal of tuff pavers in case of laying of supply lines outside a petrol pump (detail is mentioned in 5.2 of Chapter 5), restoration will be done by the contractor after removal and this activity will be carried out in early morning hours • In case of any damage to the structure or property of local residents, contractor shall restore the site (if possible) or pay the compensation for in lieu of damage • Local residents and shopkeepers will be informed well before time about the project activities 				

Environment & Social Management Plan (ESMP)

Proposed Sub-project activities	Potential Environmental/Social Impacts	Magnitude of Impact	Mitigation Measures	Mitigation Implementation Responsibility	Monitoring Indicators	Monitoring Frequency	Monitoring Responsibility
	<ul style="list-style-type: none"> • Temporary passage way interruption • Conflicts. • Dissatisfaction for the project • Scattered construction material may obstruct mobility. • Damage to local residents structures • Accessibility and privacy of women 		<ul style="list-style-type: none"> • Through contractual agreement with the MC, contractor will instruct the labor/workers that they will not interfere with the local community and will not disturb the privacy of women. 				
Construction material storage, handling and use	<p>Environmental Issues:</p> <ul style="list-style-type: none"> • Water may also be contaminated due to the any oil spillages from machinery. • Health risk to workers and 	Medium	<ul style="list-style-type: none"> • Construction material will be covered and appropriately secured to ensure safe passage between the destinations during transportation • Loads/ heaps will have appropriate cover to prevent spillage and contractor should be responsible for any clean up resulting from any failure. • Materials will not be loaded to a higher level than the side and tail 	Contractor	Visual/Pictures	<ul style="list-style-type: none"> • Daily site visit during construction phase • Fortnightly/ Weekly • Once during the construction phase 	<ul style="list-style-type: none"> • ESFPs • DPO ESM • Supervision Consultants E&S team

Environment & Social Management Plan (ESMP)

Proposed Sub-project activities	Potential Environmental/Social Impacts	Magnitude of Impact	Mitigation Measures	Mitigation Implementation Responsibility	Monitoring Indicators	Monitoring Frequency	Monitoring Responsibility
	<p>local inhabitants.</p> <p>Social Issues:</p> <ul style="list-style-type: none"> • Land acquisition for storage of construction material • Accidents/Injuries expected if neglected • Blockage of passage for pedestrians • Haphazard arrangement of construction material 		<p>boards and shall be covered with a good quality tarpaulin;</p> <ul style="list-style-type: none"> • If land acquired for storage of machinery & materials on temporarily basis: Contractor is liable to compensate the land owner according to agreement/negotiations/ voluntarily • Contractor will lay/ utilize construction materials as per work requirement from his store. • Contractor will use night vision reflective signboards/ reflective tapes to cordon off the area during construction activities. 				
Labor Camp (if established by Contractor)	Health impacts due to absence of housing and sanitation facilities in labor camp.	Medium	<ul style="list-style-type: none"> • Contractor will ensure provision of appropriate housing, water supply, and sanitation facilities to construction labor. • Good housekeeping will be ensured inside campsite • Labor will be provided with quality food. 	Contractor	Visual/ Pictures, Vehicle emission tests reports, GRM Complaints record	<ul style="list-style-type: none"> • Daily site visit during construction phase • Fortnightly/ Weekly • Once during the construction phase 	<ul style="list-style-type: none"> • ESFPs • DPO ESM • Supervision Consultants E&S team

Environment & Social Management Plan (ESMP)

Proposed Sub-project activities	Potential Environmental/ Social Impacts	Magnitude of Impact	Mitigation Measures	Mitigation Implementation Responsibility	Monitoring Indicators	Monitoring Frequency	Monitoring Responsibility
			<ul style="list-style-type: none"> • Better heating & cooling facilities will be provided by the Contractor as per season accordingly. • Better accommodation will be ensured by the Contractor. ○ It's better to accommodate labor in Containers Camps/ houses with all amenities. 				
Vehicle Movements	<ul style="list-style-type: none"> ○ Traffic congestion ○ Conflicts 	Medium	<ul style="list-style-type: none"> ○ Alternative routes will be provided. ○ Sign boards and posters will also be displayed at project site and adjacent areas as well. Inform the residents about timing, schedule and construction work duration. ○ Work will be done in portions so that the alternate road may be used safely and vehicles movement will not be disturbed. <p>Contractor will submit Traffic Management Plan and approve from ESFPs before the execution of work.</p>	Contractor	Visual/ Pictures	<ul style="list-style-type: none"> • Daily site visit during construction phase • Fortnightly /Weekly • Once during the construction phase 	<ul style="list-style-type: none"> • ESFPs • DPO ESM • Supervision Consultants E&S team
Safety Issues	Open Manholes without covers	Medium	No such activity is involved in this Sub-project	Contractor	Visual/ Pictures	<ul style="list-style-type: none"> • Daily site visit during construction phase • Fortnightly/ Weekly • Once during the 	<ul style="list-style-type: none"> • ESFPs • DPO ESM • Supervision Consultants E&S team

Environment & Social Management Plan (ESMP)

Proposed Sub-project activities	Potential Environmental/Social Impacts	Magnitude of Impact	Mitigation Measures	Mitigation Implementation Responsibility	Monitoring Indicators	Monitoring Frequency	Monitoring Responsibility
						construction phase	
Public access	Problems for pedestrians. Normal mode of transport may be disturbed during Sub-project execution.	Medium	<ul style="list-style-type: none"> • Alternate access route will be made sure. • Construction works will be done within the premises of MC facility area. • Cordon off excavated area. 	Contractor	Visual/Pictures	<ul style="list-style-type: none"> • Daily site visit during construction phase • Fortnightly/ Weekly • Once during the construction phase 	<ul style="list-style-type: none"> • ESFPs • DPO ESM • Supervision Consultants E&S team
Drinking water contamination	<ul style="list-style-type: none"> • Health issues. • Public Conflicts with labor. 	Medium	<ul style="list-style-type: none"> • Control of waste water with Sucker machines to avoid drinking water contamination. • Contact Nos. of MC help line will be displayed at project site and public may contact on these Nos. in case of any emergency. • Minor leakage control with tapes. • Disposal of construction waste in environment friendly way. 	Contractor	Visual/Pictures	<ul style="list-style-type: none"> • Daily site visit during construction phase • Fortnightly/ Weekly • Once during the construction phase 	<ul style="list-style-type: none"> • ESFPs • DPO ESM • Supervision Consultants E&S team
Sexual Harassment & Labor Influx	Social Conflicts	Small	<ul style="list-style-type: none"> • Contractor will give behavioral training to the workforce. • Contractor will hire local labor for unskilled works. 	Contractor	Visual/Pictures	<ul style="list-style-type: none"> • Daily site visit during construction phase • Fortnightly/ Weekly 	<ul style="list-style-type: none"> • ESFPs • DPO ESM • Supervision Consultants E&S team

Environment & Social Management Plan (ESMP)

Proposed Sub-project activities	Potential Environmental/Social Impacts	Magnitude of Impact	Mitigation Measures	Mitigation Implementation Responsibility	Monitoring Indicators	Monitoring Frequency	Monitoring Responsibility
						<ul style="list-style-type: none"> Once during the construction phase 	
COVID-19 SOPs implementation	Spread of COVID among the labor		<ul style="list-style-type: none"> Contractor will provide face masks to the labor on daily basis to reduce COVID impact. Contractor will follow COVID-19 guidelines during construction works (Annex-III) 	Contractor	Visual/Pictures/Reported/Complaints by public during visit	<ul style="list-style-type: none"> Daily site visit during construction phase Fortnightly/Weekly Once during the construction phase 	<ul style="list-style-type: none"> ESFPs DPO ESM Supervision Consultants E&S team
C- Operation Phase							
Seepage/Spill water	Environmental issues: Increase moisture content in soil which affects the structures / foundation of buildings in nearby areas.	Significant	<ul style="list-style-type: none"> MC will maintain road lighting system for night vision. Road surface will be repaired/maintained by MC. Road furniture will be maintained by MC. MC will run its GRM in an effective and efficient way. 	Contractor	Visual/Pictures	Regularly	MC Officials

Environment & Social Management Plan (ESMP)

Proposed Sub-project activities	Potential Environmental/Social Impacts	Magnitude of Impact	Mitigation Measures	Mitigation Implementation Responsibility	Monitoring Indicators	Monitoring Frequency	Monitoring Responsibility
	Contaminate the water Social issues: No significant impacts will arise						
Water Supply line damage	<ul style="list-style-type: none"> Contamination Water borne diseases 	Significant	<ul style="list-style-type: none"> MC will ensure the regular water quality monitoring and record of lab analysis MC will run its GRM in an effective and efficient way Emergency Preparedness and response plans are the part of MC regular municipal service delivery system. MC will immediately stop the supply line in case of any such emergency. MC will inform residents regarding stoppage of water supply and time duration of water supply disconnection. MC operators will be informed regarding damage in supply line. MC relevant officials will be repairing the supply line accordingly. This repair and maintenance carried out by inhouse MC, no contractor will be hired. 	MC Khanewal	Record maintenance of public complaints and Water Quality Analysis Reports	After 06 months and upon receiving of complaints	MC officials

8.9. Environment and Social Management Plan Implementation Budget

Sub-project: Installation of 03 Tube-wells with Rehabilitation of 03 Overhead Reservoirs & Laying of Water Supply lines, in Khanewal City

Table 8-2: Environmental Implementation Budget

Sr. No.	Description	Quantity	Per Unit Cost (PKR)	Total Cost
				(PKR)
1. Environmental Quality Monitoring				
1.1	Water Quality Testing all 32 parameters (at the time of installation of new tube-wells and after installation and for each OHR after rehabilitation)	3+3+3=09	22,000	198,000
1.2	Air quality monitoring covering CO, SO ₂ , O ₂ , NO ₂ , NO, NO _x , CO ₂ , PM _{2.5} , and PM _{2.10} , Smoke (One sample from at-least 5 locations surrounding the project site)	5	85,000	425,000
1.3	Noise level Monitoring (from each site)	9	1,000	9,000
Subtotal (1)				632,000
2 Implementation of OHS Requirements				
2.1	Remuneration of Environmental Manager	1 for 6 Months	70,000	420,000
2.2	Remuneration of Health and Safety Officer (2 months)	1 for 6 Months	50,000	300,000
2.3	Remuneration of Social Manager (2 months)	1 for 6 Months	70,000	420,000
2.4	Preparation of site specific EMPs	3	1,000	3,000
2.5	Purchase of PPEs			
a.	Safety Shoes Pairs	10	4,000	40,000
b.	P. Caps	30	200	6,000
c.	Hard Hats	15	500	75,000
d.	Glowing Jackets	30	300	9,000
e.	Pairs of Gloves	50	100	5,000
f.	Face Masks	500	10	5,000
g.	Sanitizers	20	300	6,000
2.6	Establishment of dispensary (Salary of Dispenser)	1 for 6 months	25,000	150,000
2.7	Medicines (LS)	Lump Sum	100,000	100,000
2.8	First Aid Box	3	2000	6,000
2.9	Misc.	LS	10,000	10,000
Subtotal (2)				1,480,000
3 Training sessions with labor and with local communities at site on code of ethics, EHS and GRM				
3.1	Boarding and Lodging	LS	25,000	25,000
3.2	Transportation	LS	25,000	25,000
3.3	Training Material	LS	15,000	15,000
3.4	Entertainment	LS	30,000	30,000
3.5	Misc.	LS	10,000	10,000
Subtotal (3)				105,000
Total (1+2+3)				2,217,000
Total in Million				2.217 m

Environmental Monitoring Plan is attached as Annexure VI

Section-9 Capacity Building

9.1. General

A comprehensive program will be followed to strengthen the technical and institutional capacities of the executing agency (MC Khanewal), contractors, and laborers.

Table 9-1: Training / Awareness and Sensitization Plan

#	Components	Audience	Level	Modality	Frequency	Responsibility
1	ESMF Site Specific requirements and E&S Management and Mitigation Plan	MO-1 MO-P and MC field staff ⁵	Training	Briefing Presentations Mock Activities	Before execution of sub-project and time to time instructions	PMDFC ESM team
2	ESMP Implementation and Monitoring Plan	MO-1 MO-P MC field staff	Training	Briefing Presentations Mock Activities		
		Contractor	Awareness and sensitization	Briefing	At the time of Contract signing and before execution	DPO-ESM ESFPs
		Labor	Awareness and sensitization	Briefing	Before execution and time to time during execution	DPO-ESM ESFPs
3	EHS SOPs for Labor/Workers (including women workers)	Contractor	Awareness and sensitization	Briefing and Illustrations	Before execution and time to time during execution	DPO-ESM ESFPs
		Labor/workers	Awareness and sensitization on SOPs Training on Use of PPEs	Presentations Illustrations Mock activities Resource material	Before execution and time to time during execution	DPO-ESM ESFPs
4	GRM	Contractor	Awareness and sensitization	Briefing	Before execution and time to time during execution	DPO-ESM ESFPs

⁵ For ESFPs and MC field staff, PMDFC will organize time to time trainings and a training/ capacity building program has been designed in this regard

Environment & Social Management Plan (ESMP)

#	Components	Audience	Level	Modality	Frequency	Responsibility
		Labor/ workers	Awareness and sensitization	Briefing and resource material	Before execution and time to time during execution	DPO-ESM ESFPs
5	GRM, Environmental Pollution, Social issues	Local communities	Awareness Sensitization	Public consultation Awareness messages Traffic Signage Temporary cardon of the construction area	Throughout the cycle of execution of sub- project	MC DPO-ESM

Section-10 Institutional Framework

Following institutions of Govt. of Punjab/ others are related to the implementation of environmental and social management of PCP.

10.1. Local Government and Community Development Department (LG&CDD)

LG&CDD with assistance from the Punjab Local Government Board (PLGB) and PMDFC will have overall responsibility for Program reporting, monitoring and evaluation (M&E), regulation setting, and coordination with Program MCs. LG & CDD will also take up Annual Performance Assessment (APA) of the MCs by appointing an independent Agency.

10.2. Punjab Municipal Development Fund Company (PMDFC)

PMDFC will act as the lead technical agency and will be tasked to:

- Provide capacity building support to partner MCs to achieve DLI results.
- Deployment and maintenance support for e-governance and improved judiciary systems, and training of MC staff on new systems.
- Consolidate information related to service delivery, finances and accounts, expenditure, and complaint resolution, and communicate the compiled information to finance department FD and LG via reporting dashboards set up at these agencies.
- Conduct procurement of consultancies for capacity building of MCs and for design and supervision consultants. The mode of procurement of goods and works for the partner municipal committees will however be decided by Program Steering Committee (PSC). Provide technical assistance in areas such as service delivery standards, and own source revenue mobilization, manage regular M&E processes and provide consolidated information to LG&CDD on progress of activities per M&E requirements.
- Assist with Program reporting, including the mid-year and annual program reports. Assist with day to-day coordination of the Program.
- ESM Wing PMDFC will facilitate the implementation of ESMP through MC. ESM Wing would also support community participation, consultations and other social activities from the Sub-project identification to completion stage.

10.2.1. Central Program Management Team (CPMT)

PMDFC has Central Program Management Team in Lahore, which will have overall responsibility for the above tasks. This ESM team comprise of:

- Senior Program Officer Environment & Social Management
- Program Officer Environment & Social Management

10.2.2. Regional Program Management Team

PMDFC has Regional Program Management Team in Faisalabad, Gujranwala and Khanewal regions, which will have overall responsibility for the ESM tasks. This ESM team comprise of:

- Deputy Program Officer Environment & Social Management (Faisalabad)
- Deputy Program Officer Environment & Social Management (Gujranwala)
- Deputy Program Officer Environment & Social Management (Khanewal)

10.3. Municipal Committee Khanewal

Overall responsibility for ESMP implementation and monitoring will rest with the MC Khanewal. Environment & Social Focal Persons (ESFPs) will play a key role in true implementation of E & S prospects of ESMP. ESFPs are following nominated officials:

- Municipal Officer Infrastructure (For Environmental Aspects)
- Municipal Officer Planning (For Social Aspects)

10.4. Environment Protection Department (EPD)

Environment Protection Department (EPD) will play key role towards making Sub-project environmentally sustainable and socially acceptable. EPD will assign focal persons to give their part in making PCP a success story.

10.5. Contractor

The Contractor will be responsible for on-field implementation of the ESMP and environmental protection liabilities under the Punjab Environmental Protection Act (Amendment 2012) and World Bank's Environmental and Social Safeguard Policies. He will also be responsible for compliance of ESMP provisions keeping in view his contract with the MC. The Contractor will train his crews in all aspects for implementation of the ESMP.

Environment & Social Management Plan (ESMP)

The ESMP will be an integral part of the contract document. The bid would include a detailed environmental mitigation budget as part of the engineering costs of the respective works. Contractor will also be responsible for implementation of social and environmental guidelines for Contractors prepared by PMDFC ESM Wing (Annex-II) during execution of work. Contractor will engage environmental and social officers to fulfill the above requirements.

Contractor team will be comprised off following personal for E & S management onsite;

- Environmental Manager
- HSE Supervision

An Environmental and Social Management Framework (ESMF) was prepared for Punjab Cities to facilitate and technically assist the Municipal Committees (MCs) in better understanding and compliance of social and environmental management processes and procedures according to the World Bank policies and core principles, local policies and legal framework. Sub-projects proposed under Punjab Cities Program (PCP) would potentially cause environmental and social impacts. The exact nature, extent, and severity of the impacts of these sub-projects assessed by using Environmental and Social (E&S) Screening Checklist recommended under ESMF.

Environmental & Social Screening Checklists

Instructions:
 Environmental and Social Focal Persons (ESFPs)⁶ nominated by the MCs for PCP environmental and social management, will use this checklist in field for environmental and social screening and categorization of each and every sub-project proposed to be executed under the Program.
 Deputy Program Officers-Environmental and Social Management deputed by PMDFC in regional offices will technically assist and support the ESFPs/MCs in filling in of this Checklist.
 It is to be attached with the main document² of sub-projects at planning stage and will be duly signed by the relevant ESFP and endorsed by the respective DPO-ESM.
 This checklist focuses on environmental issues and social concerns. To ensure that social dimensions are adequately considered, Involuntary Resettlement Screening Checklist will also be used.
 (iii) The purpose of this E&S Screening Checklists is to identify potential “Negative” impacts of environmental and social attributes or to enhance the existing environmental & social benefits. Use the “remarks” section to discuss any anticipated mitigation measures.

Name of ESFP: Zain Ali, Municipal Officer (I&S) Ijaz Pahore MOP

Name of MC: Khanewal

Sub-Project Sector: Water Supply

Sub-Project Title: Installation of 03 NO.Tube Wells, Rehabilitation of 03 No. Over Head Reservoirs and Laying of New Supply Lines for Domestic Water Supply in Khanewal City

Sub- Project Categorization: E-2 & S-2

Date of Screening: 24-08-2022 and then revised on 18/19/20-10-2022

Anticipated Project Activities:

- i. Trial bore, electrical resistivity survey and ground water potential external investigations
- ii. Pipe Boring and conversion into tube well having discharge of 1.5 cusec.
- iii. Construction of Pumping chamber 12'x12' size
- iv. Providing, installing Vertical Turbine Pump & Specials
- v. Installation of Bulk water flow meter
- vi. Providing ,Installing of hypo chlorinators
- vii. Repair of Overhead Reservoirs
- viii. Providing laying jointing of 8" i/d Rising main from Tube well to existing Rising main of OHR
- ix. External electric connection through WAPDA
- x. Laying of Water Supply Lines

⁶ In all MCs, ESFPs are notified by Local government; MO (I&S) are focal persons for environmental sector and MO (P) are focal persons for social sectors.

² It is meant as PC-I and/or engineering estimates of sub-project

Environment & Social Management Plan (ESMP)

- xi. Operation and maintenance

Estimated Cost of Subprojects 47.48 (M.Rs) + Rs. 2.217 (M. Rs) as ESMP management & monitoring cost

Tentative Completion Time/Duration: 06 months

Based on the following Environmental and Social Screening Checklist, E & S Categorization of sub-project has been carried out using the criteria given in **Annex- E.I.**

It may be concluded that the subproject would have moderate environmental impacts so subproject is categorized as **environmental category E2** therefore Environmental and Social Management Plans (ESMP) will be required.

However, sub-project do not involve any human displacement or resettlement but it may cause temporary disturbance and localized impacts on the local communities so it is characterized as **social category S2.**

Moreover, the subproject will require construction labor/ workers for the execution therefore Environment, Health and Safety SOPs developed by PMDFC, will be applicable and followed by the contractor.

The cost for the implementation of Environment and Social Management Plan (ESMP) including Environment, Health and Safety SOPs for labor will be 2.217 million to be borne by the contractor as mentioned in the bidding document for the subproject.

Environmental & Social Screening Checklist (Installation of Tube well at Colony No.1)

Screening Questions	Yes	No	Remarks
A. Project Siting			
Is the Sub-Project area adjacent to or within any of the following:			
Environmentally sensitive areas?			
Legally protected Area		<input type="checkbox"/>	No legally protected area lies in the sub-project area
Any surface water body (river, canal, stream, lake, wetland) within 250 meter of the proposed sub project		<input type="checkbox"/>	No surface water body present in 250 meter of the subproject
Estuarine		<input type="checkbox"/>	No estuarine present in sub-project area
Special area for protecting biodiversity		<input type="checkbox"/>	No such area found near sub-project site
Buffer zone of protected area		<input type="checkbox"/>	No buffer zone of environmentally protected area present near sub-project site
Mangroves Forest		<input type="checkbox"/>	No mangroves forest present in sub-project area
Man-made forest /game reserve, orchid /crops or any other area of environmental importance		<input type="checkbox"/>	No man-made forest /game reserve, orchid /crops or any other area of environmental importance present along sub-project site
Socially sensitive / important areas/ communities/ people?			
Physical Cultural Resources (PCRs) and or any site of cultural/religious importance (Graveyard, Shrine, Mosque, Church, <i>Gordwarah</i> , Temple, Fort, archeological/historical site) within 100 m of the proposed subproject		<input type="checkbox"/>	No PCR found in the vicinity of sub-project area
Sensitive receptors (Schools, colleges, hospitals and clinics) within 100 meter of the proposed sub project	<input type="checkbox"/>		A school is present near project site but outside the RoW of the project, no major impacts are anticipated except for noise which will be managed by implementing mitigation plan proposed in ESMP.
Any graveyard of local community (Muslims or Christians)		<input type="checkbox"/>	No graveyard present near subproject site
Any demographic or socio-economic aspects of the subproject area that are already vulnerable (e.g., high incidence of marginalized populations, rural-urban migrants, illegal settlements, squatters, ethnic minorities, people with disabilities, people in old age, socially isolated segments ⁷ of the society and women or children)?		<input type="checkbox"/>	No demographically or socio-economically vulnerable aspects of the sub-project were observed

⁷ Due to caste, creed, religion or gender e.g. transgender

Environment & Social Management Plan (ESMP)

Already existing infrastructure (including public amenities) which may be required to dismantle or may be affected temporarily by any means?		<input type="checkbox"/>	As the sub-project activities will be executed on government land so no public amenities will be disturbed/ dismantled
B. Potential Environmental Impacts Will the Sub-Pr			
1. Disturbance to habitats/ biodiversity of environmentally sensitive or protected areas?		<input type="checkbox"/>	No environmentally sensitive or protected area present in the sub-project area
2. Cutting of trees?		<input type="checkbox"/>	No cutting of trees will be required during execution of the sub-project
3. Disruption to habitats/ biodiversity of surrounding ecosystem/ environment?		<input type="checkbox"/>	Project activities include only boring and minor excavation and will not have any impact on surrounding environment
4. Generation of wastewater during construction or operation?	<input type="checkbox"/>		Waste water will be generated during boring. The generated waste water will be removed through pumping machine
5. Pollution of surface water/ ground water due to wastewater discharge from construction site or due to direct/indirect disposal of wastewater?	<input type="checkbox"/>		Waste water generated during boring if not managed may result in vector diseases. However, contractor will be instructed by the MC to remove waste water through pumping machine within 24 hours
6. Alteration of surface water hydrology of waterways resulting in increased sediment in streams/ rivers or due to increased soil erosion at construction site?		<input type="checkbox"/>	No surface water body is present near sub-project area
7. Deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction?		<input type="checkbox"/>	No surface water body is present near sub-project area
8. Over pumping of ground water, leading to salinization and ground subsidence?	<input type="checkbox"/>		If ground water quality is marginal then over pumping of ground water would lead to salinization and ground subsidence. Water quality analysis reports will be attached with the ESMP and contractor will ensure to carry out water quality analysis during and after execution of the sub-project
9. Serious contamination of soil due to construction works?		<input type="checkbox"/>	Sub-project activities do not involve use of chemicals or lubricants, only earth material, sand and cement will be used, so no serious contamination of soil is anticipated.
10. Aggravation of solid waste problems in the area?		<input type="checkbox"/>	No aggravation of solid waste problems in the area is anticipated. The waste construction material will be collected and disposed at designated place recommended by supervision engineer.
11. Generation of hazardous waste?		<input type="checkbox"/>	No hazardous chemicals will be used in project activities.

Environment & Social Management Plan (ESMP)

<p>12. Increased air pollution due to sub-project construction and operation?</p>		<input type="checkbox"/>	<p>The subproject interventions are on small scale that will not significantly increase air pollution. However, if boring machine is not properly tuned, it may increase air pollution at local level.</p>
<p>13. Noise and vibration due to sub-project construction or operation?</p>	<input type="checkbox"/>		<p>Noise and vibration will be generated during tube well boring but the level is expected to be low and will not impact the surrounding communities.</p>
<p>14. Creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents due to solid/ liquid?</p>	<input type="checkbox"/>		<p>The water abstracted during tube well boring if disposed in open ponds would create breeding habitats for diseases such as those transmitted by mosquitoes. However it will be monitored by the ESFPs of MC and DPO-ESM that waste water should be pumped through machine within 24 hours and not standing at the site</p>
<p>15. Use of chemicals during construction?</p>		<input type="checkbox"/>	<p>No chemicals will be used</p>
<p>C: Potential Social Impacts Will the Sub-Project cause...</p>			
<p>1. Impairment of historical/ cultural areas; disfiguration of landscape or potential loss/damage to Physical Cultural Resources (PCRs)?</p>		<input type="checkbox"/>	<p>No historical/ cultural areas or PCRs present in the sub-project area</p>
<p>2. Displacement or involuntary resettlement of people? (physical displacement and/or economic displacement) (If “Yes”, please also fill Involuntary Resettlement Screening Checklist)</p>		<input type="checkbox"/>	<p>No one will be required to be displaced or resettled due to sub-project interventions</p>
<p>3. Disproportionate impacts on the poor, women and children and or other vulnerable groups ⁴(mentioned above)?</p>		<input type="checkbox"/>	<p>Sub-project will not cause any negative impact on any of the vulnerable groups. However, local communities will be informed well before execution of the project and GRM awareness will be ensured throughout the execution of sub-project</p>
<p>4. Temporary impediments in movements of people/ transport and animals?</p>		<input type="checkbox"/>	<p>As the construction activities will be confined within the boundary wall of existing water supply facility of MC so there will be no impediment in the movement of people, transport or animals.</p>
<p>5. Large population influx during sub-project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?</p>		<input type="checkbox"/>	<p>Local labor will be hired who will return to their houses after day’s work and the sub-project will not cause burden on social infrastructure and services</p>
<p>6. Social conflicts if workers from other areas are hired?</p>		<input type="checkbox"/>	<p>To avoid social conflicts local labor will be hired</p>
<p>7. Risks and vulnerabilities related to occupational health and safety due to physical,</p>	<input type="checkbox"/>		<p>There may be safety and health issues during material transportation and pipe boring. Contractor will be required to provide PPEs</p>

Environment & Social Management Plan (ESMP)

chemical, biological, and radiological hazards during project construction and operation?			and implement HSE plan at site to avoid such hazards. Contractor will be bound to implement EHS labor/workers SOPs developed by the PMDFC
8. Risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?	<input type="checkbox"/>		There may be safety issues during material transportation and construction activities. Health and safety SOPs will be implemented
9. Community safety risks due to both accidental and natural causes, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?	<input type="checkbox"/>		There may be safety issues during material transportation and Construction activities. Health and safety SOPs will have to be implemented
10. Any impact on sensitive receptors (mentioned above)		<input type="checkbox"/>	No sensitive receptors present along sub-project area therefore no such impacts are anticipated
11. Any impact of negative nature on already existing infrastructure including public amenities		<input type="checkbox"/>	No public amenities or infrastructure within RoW of the subproject area. There will be no impact on temporary land acquisition for material storage

4 Women, Children, Women headed households, People in old age, people having disabilities, socially isolated community groups and or people living below the poverty line

Involuntary Resettlement Checklist

Environmental & Social Screening Checklist (Installation of Tube well at Colony No.1)

SECTION 1	Yes	No	Expected	Remarks
Does the project require land acquisition? Yes/No		✓		
If yes, then describe the type of land being acquired from the categories below:				
Has Any AED been conducted at the proposed location by the government Yes/No		✓		Was confirmed during public consultation
Land (Quantify and describe types of land being acquired in "remarks column".		✓		
Government and LG owned land free of occupation (agriculture or settlement)	✓			
Government or state-owned land (other than LG) free of occupation (agriculture or settlement)		✓		
Private land		✓		
Residential		✓		
Commercial		✓		
Agricultural		✓		

Environment & Social Management Plan (ESMP)

SECTION 1	Yes	No	Expected	Remarks
Communal		✓		
Others (specify in "remarks").		✓		
Name of owner/owners and type of ownership document if available.		✓		
If land is being acquired, describe any structures constructed on it		✓		
Land-based assets:		✓		
Residential structures		✓		
Commercial structures (specify in "remarks")		✓		
Community structures (specify in "remarks")		✓		
Agriculture structures (specify in "remarks")		✓		
Public utilities (specify in "remarks")		✓		
Others (specify in "remarks")		✓		
If agricultural land is being acquired, specify the following:		✓		
Agriculture related impacts		✓		
Crops and vegetables (specify types and cropping area in "remarks").		✓		
Trees (specify number and types in "remarks").		✓		
Others (specify in "remarks").		✓		
Affected Persons (APs)		✓		
Will any people be displaced from the land when acquired? Yes/No		✓		
Number of APs		✓		
Males		✓		
Females		✓		
Titled land owners		✓		
Tenants and sharecroppers		✓		
Leaseholders		✓		
Agriculture wage laborers		✓		
Encroachers and squatters (specify in remarks column)		✓		
Vulnerable APs (e.g. women headed households, minors and aged, orphans, disabled persons and those below the poverty line). Specify the number and vulnerability in "remarks".		✓		
Others (specify in "remarks")		✓		

SECTION 1	Yes	No	Expected	Remarks
How will people be affected?		✓		

Environmental & Social Screening Checklist (Installation of Tube well at People’s Colony)

Screening Questions	Yes	No	Remarks
A. Project Siting			
Is the Sub-Project area adjacent to or within any of the following:			
Environmentally sensitive areas?			
Legally protected Area		<input type="checkbox"/>	No legally protected area lies in the sub-project area
Any surface water body (river, canal, stream, lake, wetland) within 250 meter of the proposed sub project		<input type="checkbox"/>	No surface water body present in 250 meter of the subproject
Estuarine		<input type="checkbox"/>	No estuarine present in sub-project area
Special area for protecting biodiversity		<input type="checkbox"/>	No such area found near sub-project site
Buffer zone of protected area		<input type="checkbox"/>	No buffer zone of environmentally protected area present near sub-project site
Mangroves Forest		<input type="checkbox"/>	No mangroves forest present in sub-project area
Man-made forest /game reserve, orchid /crops or any other area of environmental importance		<input type="checkbox"/>	No man-made forest /game reserve, orchid /crops or any other area of environmental importance present along sub-project site
Socially sensitive / important areas/ communities/ people?			
Physical Cultural Resources (PCRs) and or any site of cultural/religious importance (Graveyard, Shrine, Mosque, Church, <i>Gordwarah</i> , Temple, Fort, archeological/ historical site) within 100 m of the proposed subproject		<input type="checkbox"/>	No PCR found in the vicinity of sub-project area
Sensitive receptors (Schools, colleges, hospitals and clinics) within 100 meter of the proposed sub project		<input type="checkbox"/>	A school is present near project site but outside the RoW of the project, no major impacts are anticipated except for noise which will be managed by implementing mitigation plan proposed in ESMP.
Any graveyard of local community (Muslims or Christians)		<input type="checkbox"/>	No graveyard present near subproject site
Any demographic or socio-economic aspects of the subproject area that are already vulnerable (e.g., high incidence of marginalized populations, rural-urban migrants, illegal settlements, squatters, ethnic minorities, people with disabilities, people in		<input type="checkbox"/>	No demographically or socio-economically vulnerable aspects of the sub-project were observed

Environment & Social Management Plan (ESMP)

old age, socially isolated segments ⁸ of the society and women or children)?			
Already existing infrastructure (including public amenities) which may be required to dismantle or may be affected temporarily by any means?		<input type="checkbox"/>	As the sub-project activities will be executed on government land so no public amenities will be disturbed/ dismantled
B. Potential Environmental Impacts Will the Sub-I			
1. Disturbance to habitats/ biodiversity of environmentally sensitive or protected areas?		<input type="checkbox"/>	No environmentally sensitive or protected area present in the sub-project area
2. Cutting of trees?		<input type="checkbox"/>	No cutting of trees will be required during execution of the sub-project
3. Disruption to habitats/ biodiversity of surrounding ecosystem/ environment?		<input type="checkbox"/>	Project activities include only boring and minor excavation and will not have any impact on surrounding environment
4. Generation of wastewater during construction or operation?	<input type="checkbox"/>		Waste water will be generated during boring. The generated waste water will be removed through pumping machine
5. Pollution of surface water/ground water due to wastewater discharge from construction site or due to direct/indirect disposal of wastewater?	<input type="checkbox"/>		Waste water generated during boring if not managed may result in vector diseases. It will be ensured by the contractor to remove waste water within 24 hours and ESFPs of MC and DPO-ESM will monitor the overall activity during execution
6. Alteration of surface water hydrology of waterways resulting in increased sediment in streams/ rivers or due to increased soil erosion at construction site?		<input type="checkbox"/>	No surface water body is present near sub-project area
7. Deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction?		<input type="checkbox"/>	No surface water body is present near sub-project area
8. Over pumping of ground water, leading to salinization and ground subsidence?	<input type="checkbox"/>		If ground water quality is marginal then over pumping of ground water would lead to salinization and ground subsidence. Water quality analysis reports will be attached with the ESMP and contractor will ensure to carry out water quality analysis during and after execution of the sub-project
9. Serious contamination of soil due to construction works?		<input type="checkbox"/>	Sub-project activities do not involve use of chemicals or lubricants, only earth material, sand and cement will be used, so no serious contamination of soil is anticipated.

⁸ Due to caste, creed, religion or gender e.g. transgender

Environment & Social Management Plan (ESMP)

10. Aggravation of solid waste problems in the area?		<input type="checkbox"/>	No aggravation of solid waste problems in the area is anticipated. The waste construction material will be collected and disposed at designated place recommended by supervision engineer.
11. Generation of hazardous waste?		<input type="checkbox"/>	No hazardous chemicals will be used in project activities.
12. Increased air pollution due to sub-project construction and operation?		<input type="checkbox"/>	The subproject interventions are on small scale that will not significantly increase air pollution. However, if boring machine is not properly tuned, it may increase air pollution at local level.
13. Noise and vibration due to sub-project construction or operation?	<input type="checkbox"/>		Noise and vibration will be generated during tube well boring but the level are expected to be low.
14. Creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents due to solid/ liquid?	<input type="checkbox"/>		The water abstracted during tube well boring if disposed in open ponds would create breeding habitats for diseases such as those transmitted by mosquitoes.
15. Use of chemicals during construction?		<input type="checkbox"/>	No chemicals will be used
C: Potential Social Impacts Will the Sub-Project cause...			
1. Impairment of historical/ cultural areas; disfiguration of landscape or potential loss/damage to Physical Cultural Resources (PCRs)?		<input type="checkbox"/>	No historical/ cultural areas or PCRs present in the sub-project area
2. Displacement or involuntary resettlement of people? (physical displacement and/or economic displacement) (If "Yes", please also fill Involuntary Resettlement Screening Checklist)		<input type="checkbox"/>	No one will be required to be displaced or resettled due to sub-project interventions
3. Disproportionate impacts on the poor, women and children and or other vulnerable groups ⁴ (mentioned above)?		<input type="checkbox"/>	Sub-project will not cause any impact on any of the vulnerable groups
4. Temporary impediments in movements of people/ transport and animals?		<input type="checkbox"/>	As the construction activities will be confined within the boundary wall of existing water supply facility of MC so there will be no impediment in the movement of people, transport or animals.
5. Large population influx during sub-project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?		<input type="checkbox"/>	Local labor will be hired who will return to their houses after day's work and the sub-project will not cause burden on social infrastructure and services
6. Social conflicts if workers from other areas are hired?		<input type="checkbox"/>	To avoid social conflicts local labor will be hired

Environment & Social Management Plan (ESMP)

<p>7. Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?</p>	<input type="checkbox"/>	<p>There may be safety and health issues during material transportation and pipe boring. Contractor will be required to provide PPEs and implement HSE plan at site to avoid such hazards</p>
<p>8. Risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?</p>	<input type="checkbox"/>	<p>There may be safety issues during material transportation and construction activities. Health and safety SOPs will be implemented</p>
<p>9. Community safety risks due to both accidental and natural causes, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?</p>	<input type="checkbox"/>	<p>There may be safety issues during material transportation and Construction activities. Health and safety SOPs will have to be implemented</p>
<p>10. Any impact on sensitive receptors (mentioned above)</p>	<input type="checkbox"/>	<p>No sensitive receptors present along sub-project area therefore no such impacts are anticipated</p>
<p>11. Any impact of negative nature on already existing infrastructure including public amenities</p>	<input type="checkbox"/>	<p>No public amenities or infrastructure within RoW of the subproject area</p>

Involuntary Resettlement Checklist

Environmental & Social Screening Checklist (Installation of Tube well at People’s Colony)

SECTION 1	Yes	No	Expected	Remarks
Does the project require land acquisition? Yes/No		✓		
If yes, then describe the type of land being acquired from the categories below:				
Has Any AED been conducted at the proposed location by the government Yes/No		✓		
Land (Quantify and describe types of land being acquired in “remarks column”).		✓		
Government and LG owned land free of occupation (agriculture or settlement)	✓			
Government or state-owned land (other than LG) free of occupation (agriculture or settlement)		✓		
Private land		✓		
Residential		✓		
Commercial		✓		
Agricultural		✓		
Communal		✓		
Others (specify in “remarks”).		✓		
Name of owner/owners and type of ownership document if available.		✓		
If land is being acquired, describe any structures constructed on it		✓		
Land-based assets:		✓		
Residential structures		✓		
Commercial structures (specify in “remarks”)		✓		
Community structures (specify in “remarks”)		✓		
Agriculture structures (specify in “remarks”)		✓		
Public utilities (specify in “remarks”)		✓		
Others (specify in “remarks”)		✓		
If agricultural land is being acquired, specify the following:		✓		
Agriculture related impacts		✓		
Crops and vegetables (specify types and cropping area in “remarks”).		✓		
Trees (specify number and types in “remarks”).		✓		
Others (specify in “remarks”).		✓		

Environment & Social Management Plan (ESMP)

SECTION 1	Yes	No	Expected	Remarks
Affected Persons (APs)		✓		
Will any people be displaced from the land when acquired? Yes/No		✓		
Number of APs		✓		
Males		✓		
Females		✓		
Titled land owners		✓		
Tenants and sharecroppers		✓		
Leaseholders		✓		
Agriculture wage laborers		✓		
Encroachers and squatters (specify in remarks column)		✓		
Vulnerable APs (e.g. women headed households, minors and aged, orphans, disabled persons and those below the poverty line). Specify the number and vulnerability in "remarks".		✓		
Others (specify in "remarks")		✓		
How will people be affected?		✓		

Environmental & Social Screening Checklist (Installation of Tube well at 3 Marla Abadi near Khurram Pura)

Screening Questions	Yes	No	Remarks
A. Project Siting			
Is the Sub-Project area adjacent to or within any of the following:			
Environmentally sensitive areas?			
Legally protected Area		<input type="checkbox"/>	No legally protected area lies in the sub-project area
Any surface water body (river, canal, stream, lake, wetland) within 250 meter of the proposed sub project		<input type="checkbox"/>	No surface water body present in 250 meter of the subproject
Estuarine		<input type="checkbox"/>	No estuarine present in sub-project area
Special area for protecting biodiversity		<input type="checkbox"/>	No such area found near sub-project site
Buffer zone of protected area		<input type="checkbox"/>	No buffer zone of environmentally protected area present near sub-project site
Mangroves Forest		<input type="checkbox"/>	No mangroves forest present in sub-project area
Man-made forest /game reserve, orchid /crops or any other area of environmental importance		<input type="checkbox"/>	No man-made forest /game reserve, orchid /crops or any other area of environmental importance present along sub-project site

Socially sensitive / important areas/ communities/ people?			
Physical Cultural Resources (PCRs) and or any site of cultural/religious importance (Graveyard, Shrine, Mosque, Church, <i>Gordwarah</i> , Temple, Fort, archeological/historical site) within 100 m of the proposed subproject		<input type="checkbox"/>	No PCR found in the vicinity of sub-project area
Sensitive receptors (Schools, colleges, hospitals and clinics) within 100 meter of the proposed sub project		<input type="checkbox"/>	No sensitive receptors observed along subproject site
Any graveyard of local community (Muslims or Christians)		<input type="checkbox"/>	No graveyard present near subproject site
Any demographic or socio-economic aspects of the subproject area that are already vulnerable (e.g., high incidence of marginalized populations, rural-urban migrants, illegal settlements, squatters, ethnic minorities, people with disabilities, people in old age, socially isolated segments ⁹ of the society and women or children)?		<input type="checkbox"/>	No demographically or socio-economically vulnerable aspects of the sub-project were observed
Already existing infrastructure (including public amenities) which may be required to dismantle or may be affected temporarily by any means?		<input type="checkbox"/>	As the sub-project activities will be executed on MC land as mentioned by MC representative (however, evidence of land ownership was not provided) so no public amenities will be disturbed/ dismantled
B. Potential Environmental Impacts Will the Sub-Pr			
1. Disturbance to habitats/ biodiversity of environmentally sensitive or protected areas?		<input type="checkbox"/>	No environmentally sensitive or protected area present in the sub-project area
2. Cutting of trees?		<input type="checkbox"/>	No cutting of trees will be required during execution of the sub-project
3. Disruption to habitats/ biodiversity of surrounding ecosystem/ environment?		<input type="checkbox"/>	Project activities include only boring and minor excavation and will not have any impact on surrounding environment
4. Generation of wastewater during construction or operation?	<input type="checkbox"/>		Waste water will be generated during pipe boring. The generated waste water will be removed through pumping machine within 24 hours
5. Pollution of surface water/ground water due to wastewater discharge from construction site or due to direct/indirect disposal of wastewater?	<input type="checkbox"/>		Waste water generated during boring if not managed may result in vector diseases and it will be ensured by the contractor to remove waste water within 24 hours
6. Alteration of surface water hydrology of waterways resulting in increased sediment in streams/ rivers or due to increased soil erosion at construction site?		<input type="checkbox"/>	No surface water body is present near sub-project area

⁹ Due to caste, creed, religion or gender e.g. transgender

Environment & Social Management Plan (ESMP)

7. Deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction?		<input type="checkbox"/>	No surface water body is present near sub-project area
8. Over pumping of ground water, leading to salinization and ground subsidence?	<input type="checkbox"/>		If ground water quality is marginal then over pumping of ground water would lead to salinization and ground subsidence
9. Serious contamination of soil due to construction works?		<input type="checkbox"/>	Sub-project activities do not involve use of chemicals or lubricants, only earth material, sand and cement will be used, so no serious contamination of soil is anticipated.
10. Aggravation of solid waste problems in the area?		<input type="checkbox"/>	No aggravation of solid waste problems in the area is anticipated. The waste construction material will be collected and disposed at designated place recommended by supervision engineer.
11. Generation of hazardous waste?		<input type="checkbox"/>	No hazardous chemicals will be used in project activities.
12. Increased air pollution due to sub-project construction and operation?		<input type="checkbox"/>	The subproject interventions are on small scale that will not significantly increase air pollution. However, if boring machine is not properly tuned, it may increase air pollution at local level.
13. Noise and vibration due to sub-project construction or operation?	<input type="checkbox"/>		Noise and vibration will be generated during tube well boring but the level are expected to be low.
14. Creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents due to solid/ liquid?	<input type="checkbox"/>		The water abstracted during tube well boring if disposed in open ponds would create breeding habitats for diseases such as those transmitted by mosquitoes.
15. Use of chemicals during construction?		<input type="checkbox"/>	No chemicals will be used
C: Potential Social Impacts Will the Sub-Project cause...			
1. Impairment of historical/ cultural areas; disfiguration of landscape or potential loss/damage to Physical Cultural Resources (PCRs)?		<input type="checkbox"/>	No historical/ cultural areas or PCRs present in the sub-project area
2. Displacement or involuntary resettlement of people? (physical displacement and/or economic displacement) (If “Yes”, please also fill Involuntary Resettlement Screening Checklist)		<input type="checkbox"/>	No one will be required to be displaced or resettled due to sub-project interventions
3. Disproportionate impacts on the poor, women and children and or other vulnerable groups ⁴ (mentioned above)?		<input type="checkbox"/>	Sub-project will not cause any impact on any of the vulnerable groups

Environment & Social Management Plan (ESMP)

<p>4. Temporary impediments in movements of people/ transport and animals?</p>		<input type="checkbox"/>	<p>As the construction activities will be confined to a small strip of land so there will be no impediment in the movement of people, transport or animals.</p>
<p>5. Large population influx during sub-project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?</p>		<input type="checkbox"/>	<p>Local labor will be hired who will return to their houses after day's work and the sub-project will not cause burden on social infrastructure and services</p>
<p>6. Social conflicts if workers from other areas are hired?</p>		<input type="checkbox"/>	<p>To avoid social conflicts local labor will be hired</p>
<p>7. Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?</p>	<input type="checkbox"/>		<p>There may be safety and health issues during material transportation and pipe boring. Contractor will be required to provide PPEs and implement HSE plan at site to avoid such hazards</p>
<p>8. Risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?</p>	<input type="checkbox"/>		<p>There may be safety issues during material transportation and construction activities. Health and safety SOPs will have to be implemented</p>
<p>9. Community safety risks due to both accidental and natural causes, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?</p>	<input type="checkbox"/>		<p>There may be safety issues during material transportation and Construction activities. Health and safety SOPs will have to be implemented</p>
<p>10. Any impact on sensitive receptors (mentioned above)</p>		<input type="checkbox"/>	<p>No sensitive receptors present along sub-project area therefore no such impacts are anticipated</p>
<p>11. Any impact of negative nature on already existing infrastructure including public amenities</p>		<input type="checkbox"/>	<p>No public amenities or infrastructure within RoW of the subproject area</p>

Involuntary Resettlement Checklist

Environmental & Social Screening Checklist (Installation of Tube well at 3 Marla Abadi near Khurram Pura)

SECTION 1	Yes	No	Expected	Remarks
Does the project require land acquisition? Yes/No		✓		
If yes, then describe the type of land being acquired from the categories below:				
Has Any AED been conducted at the proposed location by the government Yes/No		✓		
Land (Quantify and describe types of land being acquired in “remarks column”).		✓		
Government and LG owned land free of occupation (agriculture or settlement)	✓			
Government or state-owned land (other than LG) free of occupation (agriculture or settlement)		✓		
Private land		✓		
Residential		✓		
Commercial		✓		
Agricultural		✓		
Communal		✓		
Others (specify in “remarks”).		✓		
Name of owner/owners and type of ownership document if available.		✓		
If land is being acquired, describe any structures constructed on it		✓		
Land-based assets:		✓		
Residential structures		✓		
Commercial structures (specify in “remarks”)		✓		
Community structures (specify in “remarks”)		✓		
Agriculture structures (specify in “remarks”)		✓		
Public utilities (specify in “remarks”)		✓		
Others (specify in “remarks”)		✓		
If agricultural land is being acquired, specify the following:		✓		
Agriculture related impacts		✓		
Crops and vegetables (specify types and cropping area in “remarks”).		✓		
Trees (specify number and types in “remarks”).		✓		

Environment & Social Management Plan (ESMP)

SECTION 1	Yes	No	Expected	Remarks
Others (specify in "remarks").		✓		
Affected Persons (APs)		✓		
Will any people be displaced from the land when acquired? Yes/No		✓		
Number of APs		✓		
Males		✓		
Females		✓		
Titled land owners		✓		
Tenants and sharecroppers		✓		
Leaseholders		✓		
Agriculture wage laborers		✓		
Encroachers and squatters (specify in remarks column)		✓		
Vulnerable APs (e.g. women headed households, minors and aged, orphans, disabled persons and those below the poverty line). Specify the number and vulnerability in "remarks".		✓		
Others (specify in "remarks")		✓		
How will people be affected?		✓		

Environmental & Social Screening Checklist (Rehabilitation of OHR at Health Colony)

Screening Questions	Yes	No	Remarks
A. Project Siting			
Is the Sub-Project area adjacent to or within any of the following:			
Environmentally sensitive areas?			
Legally protected Area		<input type="checkbox"/>	No legally protected area lies in the sub-project area
Any surface water body (river, canal, stream, lake, wetland) within 250 meter of the proposed sub project		<input type="checkbox"/>	No surface water body present in 250 meter of the subproject
Estuarine		<input type="checkbox"/>	No estuarine present in sub-project area
Special area for protecting biodiversity		<input type="checkbox"/>	No such area found near sub-project site
Buffer zone of protected area		<input type="checkbox"/>	No buffer zone of environmentally protected area present near sub-project site
Mangroves Forest		<input type="checkbox"/>	No mangroves forest present in sub-project area
Man-made forest /game reserve, orchid /crops or any other area of environmental importance		<input type="checkbox"/>	No man-made forest /game reserve, orchid /crops or any other area of environmental importance present along sub-project site

Socially sensitive / important areas/ communities/ people?			
Physical Cultural Resources (PCRs) and or any site of cultural/religious importance (Graveyard, Shrine, Mosque, Church, <i>Gordwarah</i> , Temple, Fort, archeological/historical site) within 100 m of the proposed subproject	<input type="checkbox"/>		A mosque exists near project site, but outside the RoW and CoI. The rehabilitation activities will be confined inside the boundary wall of MC premises and no direct impacts are anticipated.
Sensitive receptors (Schools, colleges, hospitals and clinics) within 100 meter of the proposed sub project		<input type="checkbox"/>	DHQ hospital is present near project site, there may be temporary obstruction in the movement of people coming to hospital due to transport of construction material. No major impacts are anticipated.
Any graveyard of local community (Muslims or Christians)		<input type="checkbox"/>	No graveyard present near subproject site
Any demographic or socio-economic aspects of the subproject area that are already vulnerable (e.g., high incidence of marginalized populations, rural-urban migrants, illegal settlements, squatters, ethnic minorities, people with disabilities, people in old age, socially isolated segments ¹⁰ of the society and women or children)?		<input type="checkbox"/>	No demographically or socio-economically vulnerable aspects of the sub-project were observed
Already existing infrastructure (including public amenities) which may be required to dismantle or may be affected temporarily by any means?		<input type="checkbox"/>	As the sub-project activities will be executed on government land so no public amenities will be disturbed/ dismantled
B. Potential Environmental Impacts Will the Sub-Pr			
1. Disturbance to habitats/ biodiversity of environmentally sensitive or protected areas?		<input type="checkbox"/>	No environmentally sensitive or protected area present in the sub-project area
2. Cutting of trees?		<input type="checkbox"/>	No cutting of trees will be required during execution of the sub-project
3. Disruption to habitats/ biodiversity of surrounding ecosystem/ environment?		<input type="checkbox"/>	Project activities include only rehabilitation of existing facility and will not have any impact on habitat or biodiversity of surrounding environment
4. Generation of wastewater during construction or operation?		<input type="checkbox"/>	No such impact is anticipated
5. Pollution of surface water/ ground water due to wastewater discharge from construction site or due to direct/ indirect disposal of wastewater?		<input type="checkbox"/>	No surface water body exists near project site, whereas rehabilitation activities will not have any effect on ground water quality, therefore such impact is not anticipated.
6. Alteration of surface water hydrology of waterways resulting in increased sediment in streams/ rivers or due to increased soil erosion at construction site?		<input type="checkbox"/>	No surface water body is present near sub-project area therefore such impact is not anticipated

¹⁰ Due to caste, creed, religion or gender e.g. transgender

Environment & Social Management Plan (ESMP)

7. Deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction?	<input type="checkbox"/>	No surface water body is present near sub-project area and no labor camps need to be established as local labor will be hired for sub-project who will return to their homes after day's work. No chemicals are to be used during project activities.
8. Over pumping of ground water, leading to salinization and ground subsidence?	<input type="checkbox"/>	Ground water pumping is not included in the project scope so such imp[act is not anticipated
9. Serious contamination of soil due to construction works?	<input type="checkbox"/>	Sub-project activities do not involve use of chemicals or lubricants, only earth material, sand and cement will be used, so no serious contamination of soil is anticipated.
10. Aggravation of solid waste problems in the area?	<input type="checkbox"/>	No aggravation of solid waste problems in the area is anticipated. The waste construction material will be collected and disposed at designated place recommended by supervision engineer.
11. Generation of hazardous waste?	<input type="checkbox"/>	No hazardous chemicals will be used in project activities.
12. Increased air pollution due to sub-project construction and operation?	<input type="checkbox"/>	The subproject interventions are on small scale that will not significantly increase air pollution. Few dust emissions are expected which can be managed at source by sprinkling water.
13. Noise and vibration due to sub-project construction or operation?	<input type="checkbox"/>	Noise from material transporting vehicles is expected but the levels are expected to be low.
14. Creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents due to solid/ liquid?	<input type="checkbox"/>	Very small quantity of waste water is expected to be generated during project activities which if not managed may become breeding habitat for mosquitos
15. Use of chemicals during construction?	<input type="checkbox"/>	No chemicals will be used
C: Potential Social Impacts Will the Sub-Project cause...		
1. Impairment of historical/ cultural areas; disfiguration of landscape or potential loss/damage to Physical Cultural Resources (PCRs)?	<input type="checkbox"/>	No such impact is anticipated
2. Displacement or involuntary resettlement of people? (physical displacement and/or economic displacement) (If "Yes", please also fill Involuntary Resettlement Screening Checklist)	<input type="checkbox"/>	No one will be required to be displaced or resettled due to sub-project interventions
3. Disproportionate impacts on the poor, women and children and or other vulnerable groups ⁴ (mentioned above)?	<input type="checkbox"/>	Sub-project will not cause any impact on any of the vulnerable groups

Environment & Social Management Plan (ESMP)

<p>4. Temporary impediments in movements of people/ transport and animals?</p>		<input type="checkbox"/>	<p>Temporary impediment in the movement of local people may occur during transportation of construction material. Contractor will be required to implement traffic management plan to counter this impact.</p>
<p>5. Large population influx during sub-project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?</p>		<input type="checkbox"/>	<p>Local labor will be hired who will return to their houses after day's work and the sub-project will not cause burden on social infrastructure and services</p>
<p>6. Social conflicts if workers from other areas are hired?</p>		<input type="checkbox"/>	<p>To avoid social conflicts local labor will be hired</p>
<p>7. Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?</p>	<input type="checkbox"/>		<p>There may be safety and health issues during construction activities. Contractor will be required to provide PPEs and implement HSE plan at site to avoid such hazards</p>
<p>8. Risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?</p>	<input type="checkbox"/>		<p>There may be safety issues during material transportation and construction activities. Health and safety SOPs will have to be implemented</p>
<p>9. Community safety risks due to both accidental and natural causes, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?</p>	<input type="checkbox"/>		<p>There may be safety issues during material transportation and Construction activities. Health and safety SOPs will have to be implemented</p>
<p>10. Any impact on sensitive receptors (mentioned above)</p>		<input type="checkbox"/>	<p>DHQ hospital is present near project site, there may be temporary obstruction in the movement of people coming to hospital due to transport of construction material. No major impacts are anticipated.</p>
<p>11. Any impact of negative nature on already existing infrastructure including public amenities</p>		<input type="checkbox"/>	<p>No public amenities or infrastructure within RoW of the subproject area.</p>

Involuntary Resettlement Checklist

Environmental & Social Screening Checklist (Rehabilitation of OHR at Health Colony)

SECTION 1	Yes	No	Expected	Remarks
Does the project require land acquisition? Yes/No		✓		
If yes, then describe the type of land being acquired from the categories below:				
Has Any AED been conducted at the proposed location by the government Yes/No		✓		
Land (Quantify and describe types of land being acquired in "remarks column".		✓		
Government and LG owned land free of occupation (agriculture or settlement)	✓			
Government or state-owned land (other than LG) free of occupation (agriculture or settlement)		✓		
Private land		✓		
Residential		✓		
Commercial		✓		
Agricultural		✓		
Communal		✓		
Others (specify in "remarks").		✓		
Name of owner/owners and type of ownership document if available.		✓		
If land is being acquired, describe any structures constructed on it		✓		
Land-based assets:		✓		
Residential structures		✓		
Commercial structures (specify in "remarks")		✓		
Community structures (specify in "remarks")		✓		
Agriculture structures (specify in "remarks")		✓		
Public utilities (specify in "remarks")		✓		
Others (specify in "remarks")		✓		
If agricultural land is being acquired, specify the following:		✓		
Agriculture related impacts		✓		
Crops and vegetables (specify types and cropping area in "remarks").		✓		
Trees (specify number and types in "remarks").		✓		
Others (specify in "remarks").		✓		

Environment & Social Management Plan (ESMP)

SECTION 1	Yes	No	Expected	Remarks
Affected Persons (APs)		✓		
Will any people be displaced from the land when acquired? Yes/No		✓		
Number of APs		✓		
Males		✓		
Females		✓		
Titled land owners		✓		
Tenants and sharecroppers		✓		
Leaseholders		✓		
Agriculture wage laborers		✓		
Encroachers and squatters (specify in remarks column)		✓		
Vulnerable APs (e.g. women headed households, minors and aged, orphans, disabled persons and those below the poverty line). Specify the number and vulnerability in "remarks".		✓		
Others (specify in "remarks")		✓		
How will people be affected?		✓		

Environmental & Social Screening Checklist (Rehabilitation of OHR at People's Colony)

Screening Questions	Yes	No	Remarks
A. Project Siting			
Is the Sub-Project area adjacent to or within any of the following:			
Environmentally sensitive areas?			
Legally protected Area		<input type="checkbox"/>	No legally protected area lies in the sub-project area
Any surface water body (river, canal, stream, lake, wetland) within 250 meter of the proposed sub project		<input type="checkbox"/>	No surface water body present in 250 meter of the subproject
Estuarine		<input type="checkbox"/>	No estuarine present in sub-project area
Special area for protecting biodiversity		<input type="checkbox"/>	No such area found near sub-project site
Buffer zone of protected area		<input type="checkbox"/>	No buffer zone of environmentally protected area present near sub-project site
Mangroves Forest		<input type="checkbox"/>	No mangroves forest present in sub-project area
Man-made forest /game reserve, orchid /crops or any other area of environmental importance		<input type="checkbox"/>	No man-made forest /game reserve, orchid /crops or any other area of environmental importance present along sub-project site
Socially sensitive / important areas/ communities/ people?			

Environment & Social Management Plan (ESMP)

Physical Cultural Resources (PCRs) and or any site of cultural/religious importance (Graveyard, Shrine, Mosque, Church, <i>Gordwarah</i> , Temple, Fort, archeological/ historical site) within 100 m of the proposed subproject	<input type="checkbox"/>	No PCR found in the vicinity of sub-project area
Sensitive receptors (Schools, colleges, hospitals and clinics) within 100 meter of the proposed sub project	<input type="checkbox"/>	A school is present near project site but outside the RoW of the project, no major impacts are anticipated except for dust emissions which will be managed by sprinkling water.
Any graveyard of local community (Muslims or Christians)	<input type="checkbox"/>	No graveyard present near subproject site
Any demographic or socio-economic aspects of the subproject area that are already vulnerable (e.g., high incidence of marginalized populations, rural-urban migrants, illegal settlements, squatters, ethnic minorities, people with disabilities, people in old age, socially isolated segments ¹¹ of the society and women or children)?	<input type="checkbox"/>	No demographically or socio-economically vulnerable aspects of the sub-project were observed
Already existing infrastructure (including public amenities) which may be required to dismantle or may be affected temporarily by any means?	<input type="checkbox"/>	As the sub-project activities will be executed on government land so no public amenities will be disturbed/ dismantled
B. Potential Environmental Impacts Will the :		
1. Disturbance to habitats/ biodiversity of environmentally sensitive or protected areas?	<input type="checkbox"/>	No environmentally sensitive or protected area present in the sub-project area
2. Cutting of trees?	<input type="checkbox"/>	No cutting of trees will be required during execution of the sub-project
3. Disruption to habitats/ biodiversity of surrounding ecosystem/ environment?	<input type="checkbox"/>	Project activities include only rehabilitation works and will not have any impact on habitat and biodiversity of surrounding environment
4. Generation of wastewater during construction or operation?	<input type="checkbox"/>	Very small quantity of waste water will be generated during rehabilitation activities. The generated waste water will require to be removed immediately
5. Pollution of surface water/ ground water due to wastewater discharge from construction site or due to direct/indirect disposal of wastewater?	<input type="checkbox"/>	No surface water body exists near project site, whereas rehabilitation activities will not have any effect on ground water quality, therefore such impact is not anticipated.
6. Alteration of surface water hydrology of waterways resulting in increased sediment in streams/ rivers or due to increased soil erosion at construction site?	<input type="checkbox"/>	No surface water body is present near sub-project area

¹¹ Due to caste, creed, religion or gender e.g. transgender

Environment & Social Management Plan (ESMP)

7. Deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction?	<input type="checkbox"/>	No surface water body is present near sub-project area
8. Over pumping of ground water, leading to salinization and ground subsidence?	<input type="checkbox"/>	No such impact is anticipated
9. Serious contamination of soil due to construction works?	<input type="checkbox"/>	Sub-project activities do not involve use of chemicals or lubricants, only earth material, sand and cement will be used, so no serious contamination of soil is anticipated.
10. Aggravation of solid waste problems in the area?	<input type="checkbox"/>	No aggravation of solid waste problems in the area is anticipated. The waste construction material will be collected and disposed at designated place recommended by supervision engineer.
11. Generation of hazardous waste?	<input type="checkbox"/>	No hazardous chemicals will be used in project activities.
12. Increased air pollution due to sub-project construction and operation?	<input type="checkbox"/>	The subproject interventions are on small scale that will not significantly increase air pollution except dust emissions which will be managed by water sprinkling
13. Noise and vibration due to sub-project construction or operation?	<input type="checkbox"/>	Noise may increase due to movement of vehicles delivering construction material but the levels are expected to be low.
14. Creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents due to solid/ liquid?	<input type="checkbox"/>	Very small quantity of waste water is expected to be generated during project activities which if not managed may become breeding habitat for mosquitos.
15. Use of chemicals during construction?	<input type="checkbox"/>	No chemicals will be used
C: Potential Social Impacts Will the Sub-Project cause...		
1. Impairment of historical/ cultural areas; disfiguration of landscape or potential loss/damage to Physical Cultural Resources (PCRs)?	<input type="checkbox"/>	No historical/ cultural areas or PCRs present in the sub-project area
2. Displacement or involuntary resettlement of people? (physical displacement and/or economic displacement) (If “Yes”, please also fill Involuntary Resettlement Screening Checklist)	<input type="checkbox"/>	No one will be required to be displaced or resettled due to sub-project interventions
3. Disproportionate impacts on the poor, women and children and or other vulnerable groups ⁴ (mentioned above)?	<input type="checkbox"/>	Sub-project will not cause any impact on any of the vulnerable groups

Environment & Social Management Plan (ESMP)

<p>4. Temporary impediments in movements of people/ transport and animals?</p>		<input type="checkbox"/>	<p>As the construction activities will be confined within the boundary wall of existing facility of MC so there will be no impediment in the movement of people, transport or animals.</p>
<p>5. Large population influx during sub-project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?</p>		<input type="checkbox"/>	<p>Local labor will be hired who will return to their houses after day's work and the sub-project will not cause burden on social infrastructure and services</p>
<p>6. Social conflicts if workers from other areas are hired?</p>		<input type="checkbox"/>	<p>To avoid social conflicts local labor will be hired</p>
<p>7. Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?</p>		<input type="checkbox"/>	<p>There may be safety and health issues during material transportation and rehabilitation works. Contractor will be required to provide PPEs and implement HSE plan at site to avoid such hazards</p>
<p>8. Risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?</p>		<input type="checkbox"/>	<p>There may be safety issues during material transportation and construction activities. Health and safety SOPs will have to be implemented</p>
<p>9. Community safety risks due to both accidental and natural causes, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?</p>		<input type="checkbox"/>	<p>There may be safety issues during material transportation and Construction activities. Health and safety SOPs will have to be implemented</p>
<p>10. Any impact on sensitive receptors (mentioned above)</p>		<input type="checkbox"/>	<p>No sensitive receptors present along sub-project area therefore no such impacts are anticipated</p>
<p>11. Any impact of negative nature on already existing infrastructure including public amenities</p>		<input type="checkbox"/>	<p>No public amenities or infrastructure within RoW of the subproject area</p>

Involuntary Resettlement Checklist

Environmental & Social Screening Checklist (Rehabilitation of OHR at People’s Colony)

SECTION 1	Yes	No	Expected	Remarks
Does the project require land acquisition? Yes/No		✓		
If yes, then describe the type of land being acquired from the categories below:				
Has Any AED been conducted at the proposed location by the government Yes/No		✓		
Land (Quantify and describe types of land being acquired in “remarks column”).		✓		
Government and LG owned land free of occupation (agriculture or settlement)	✓			
Government or state-owned land (other than LG) free of occupation (agriculture or settlement)		✓		
Private land		✓		
Residential		✓		
Commercial		✓		
Agricultural		✓		
Communal		✓		
Others (specify in “remarks”).		✓		
Name of owner/owners and type of ownership document if available.		✓		
If land is being acquired, describe any structures constructed on it		✓		
Land-based assets:		✓		
Residential structures		✓		
Commercial structures (specify in “remarks”)		✓		
Community structures (specify in “remarks”)		✓		
Agriculture structures (specify in “remarks”)		✓		
Public utilities (specify in “remarks”)		✓		
Others (specify in “remarks”)		✓		
If agricultural land is being acquired, specify the following:		✓		
Agriculture related impacts		✓		
Crops and vegetables (specify types and cropping area in “remarks”).		✓		
Trees (specify number and types in “remarks”).		✓		

Environment & Social Management Plan (ESMP)

SECTION 1	Yes	No	Expected	Remarks
Others (specify in "remarks").		✓		
Affected Persons (APs)		✓		
Will any people be displaced from the land when acquired? Yes/No		✓		
Number of APs		✓		
Males		✓		
Females		✓		
Titled land owners		✓		
Tenants and sharecroppers		✓		
Leaseholders		✓		
Agriculture wage laborers		✓		
Encroachers and squatters (specify in remarks column)		✓		
Vulnerable APs (e.g. women headed households, minors and aged, orphans, disabled persons and those below the poverty line). Specify the number and vulnerability in "remarks".		✓		
Others (specify in "remarks")		✓		
How will people be affected?		✓		

Environmental & Social Screening Checklist (Rehabilitation of OHR at 3 Marla Abadi near Khurram Pura)

Screening Questions	Yes	No	Remarks
A. Project Siting			
Is the Sub-Project area adjacent to or within any of the following:			
Environmentally sensitive areas?			
Legally protected Area		<input type="checkbox"/>	No legally protected area lies in the sub-project area
Any surface water body (river, canal, stream, lake, wetland) within 250 meter of the proposed sub project		<input type="checkbox"/>	No surface water body present in 250 meter of the subproject
Estuarine		<input type="checkbox"/>	No estuarine present in sub-project area
Special area for protecting biodiversity		<input type="checkbox"/>	No such area found near sub-project site
Buffer zone of protected area		<input type="checkbox"/>	No buffer zone of environmentally protected area present near sub-project site
Mangroves Forest		<input type="checkbox"/>	No mangroves forest present in sub-project area
Man-made forest /game reserve, orchid /crops or any other area of environmental importance		<input type="checkbox"/>	No man-made forest /game reserve, orchid /crops or any other area of environmental importance present along sub-project site

Socially sensitive / important areas/ communities/ people?			
Physical Cultural Resources (PCRs) and or any site of cultural/religious importance (Graveyard, Shrine, Mosque, Church, <i>Gordwarah</i> , Temple, Fort, archeological/historical site) within 100 m of the proposed subproject		<input type="checkbox"/>	No PCR found in the vicinity of sub-project area
Sensitive receptors (Schools, colleges, hospitals and clinics) within 100 meter of the proposed sub project		<input type="checkbox"/>	No sensitive receptors observed along subproject site
Any graveyard of local community (Muslims or Christians)		<input type="checkbox"/>	No graveyard present near subproject site
Any demographic or socio-economic aspects of the subproject area that are already vulnerable (e.g., high incidence of marginalized populations, rural-urban migrants, illegal settlements, squatters, ethnic minorities, people with disabilities, people in old age, socially isolated segments ¹² of the society and women or children)?		<input type="checkbox"/>	No demographically or socio-economically vulnerable aspects of the sub-project were observed
Already existing infrastructure (including public amenities) which may be required to dismantle or may be affected temporarily by any means?		<input type="checkbox"/>	As the sub-project activities will be executed on government land so no public amenities will be disturbed/ dismantled
B. Potential Environmental Impacts Will the Sub-1			
1. Disturbance to habitats/ biodiversity of environmentally sensitive or protected areas?		<input type="checkbox"/>	No environmentally sensitive or protected area present in the sub-project area
2. Cutting of trees?		<input type="checkbox"/>	No cutting of trees will be required during execution of the sub-project
3. Disruption to habitats/ biodiversity of surrounding ecosystem/ environment?		<input type="checkbox"/>	Project activities include only rehabilitation of OHR and will not have any impact on habitat or biodiversity of surrounding environment
4. Generation of wastewater during construction or operation?	<input type="checkbox"/>		Very small quantity of waste water will be generated during rehabilitation activities. The generated waste water will require to be removed immediately
5. Pollution of surface water/ground water due to wastewater discharge from construction site or due to direct/indirect disposal of wastewater?		<input type="checkbox"/>	No surface water body exists near project site, whereas rehabilitation activities will not have any effect on ground water quality, therefore such impact is not anticipated.
6. Alteration of surface water hydrology of waterways resulting in increased sediment in		<input type="checkbox"/>	No surface water body is present near sub-project area

¹² Due to caste, creed, religion or gender e.g. transgender

Environment & Social Management Plan (ESMP)

streams/ rivers or due to increased soil erosion at construction site?			
7. Deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction?		<input type="checkbox"/>	Very small quantity of waste water will be generated during rehabilitation activities. The generated waste water will require to be removed immediately
8. Over pumping of ground water, leading to salinization and ground subsidence?		<input type="checkbox"/>	No such impact is anticipated
9. Serious contamination of soil due to construction works?		<input type="checkbox"/>	Sub-project activities do not involve use of chemicals or lubricants, only earth material, sand and cement will be used, so no serious contamination of soil is anticipated.
10. Aggravation of solid waste problems in the area?		<input type="checkbox"/>	No aggravation of solid waste problems in the area is anticipated. The waste construction material will be collected and disposed at designated place recommended by supervision engineer.
11. Generation of hazardous waste?		<input type="checkbox"/>	No hazardous chemicals will be used in project activities.
12. Increased air pollution due to sub-project construction and operation?		<input type="checkbox"/>	The subproject interventions are on small scale that will not significantly increase air pollution, except for dust emissions which will be managed by sprinkling water.
13. Noise and vibration due to sub-project construction or operation?	<input type="checkbox"/>		Noise will be generated during rehabilitation works but the levels are expected to be low.
14. Creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents due to solid/ liquid?	<input type="checkbox"/>		Very small quantity of waste water is expected to be generated during project activities which if not managed may become breeding habitat for mosquitos.
15. Use of chemicals during construction?		<input type="checkbox"/>	No chemicals will be used
C: Potential Social Impacts Will the Sub-Project cause...			
1. Impairment of historical/ cultural areas; disfiguration of landscape or potential loss/damage to Physical Cultural Resources (PCRs)?		<input type="checkbox"/>	No historical/ cultural areas or PCRs present in the sub-project area
2. Displacement or involuntary resettlement of people? (physical displacement and/or economic displacement) (If "Yes", please also fill Involuntary Resettlement Screening Checklist)		<input type="checkbox"/>	No one will be required to be displaced or resettled due to sub-project interventions
3. Disproportionate impacts on the poor, women and children and or other vulnerable groups ⁴ (mentioned above)?		<input type="checkbox"/>	Sub-project will not cause any impact on any of the vulnerable groups

Environment & Social Management Plan (ESMP)

4. Temporary impediments in movements of people/ transport and animals?		<input type="checkbox"/>	As the construction activities will be confined to a small strip of land so there will be no impediment in the movement of people, transport or animals.
5. Large population influx during sub-project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?		<input type="checkbox"/>	Local labor will be hired who will return to their houses after day's work and the sub-project will not cause burden on social infrastructure and services
6. Social conflicts if workers from other areas are hired?		<input type="checkbox"/>	To avoid social conflicts local labor will be hired
7. Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?	<input type="checkbox"/>		There may be safety and health issues during material transportation and rehabilitation works. Contractor will be required to provide PPEs and implement HSE plan at site to avoid such hazards
8. Risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?	<input type="checkbox"/>		There may be safety issues during material transportation and construction activities. Health and safety SOPs will have to be implemented
9. Community safety risks due to both accidental and natural causes, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?	<input type="checkbox"/>		There may be safety issues during material transportation and Construction activities. Health and safety SOPs will have to be implemented
10. Any impact on sensitive receptors (mentioned above)		<input type="checkbox"/>	No sensitive receptors present along sub-project area therefore no such impacts are anticipated
11. Any impact of negative nature on already existing infrastructure including public amenities		<input type="checkbox"/>	No public amenities or infrastructure within RoW of the subproject area

Involuntary Resettlement Checklist

(Rehabilitation of OHR at 3 Marla Abadi near Khurram Pura)

SECTION 1	Yes	No	Expected	Remarks
Does the project require land acquisition? Yes/No		✓		
If yes, then describe the type of land being acquired from the categories below:				
Has Any AED been conducted at the proposed location by the government Yes/No		✓		
Land (Quantify and describe types of land being acquired in "remarks column".		✓		

Environment & Social Management Plan (ESMP)

SECTION 1	Yes	No	Expected	Remarks
Government and LG owned land free of occupation (agriculture or settlement)	✓			
Government or state-owned land (other than LG) free of occupation (agriculture or settlement)		✓		
Private land		✓		
Residential		✓		
Commercial		✓		
Agricultural		✓		
Communal		✓		
Others (specify in "remarks").		✓		
Name of owner/owners and type of ownership document if available.		✓		
If land is being acquired, describe any structures constructed on it		✓		
Land-based assets:		✓		
Residential structures		✓		
Commercial structures (specify in "remarks")		✓		
Community structures (specify in "remarks")		✓		
Agriculture structures (specify in "remarks")		✓		
Public utilities (specify in "remarks")		✓		
Others (specify in "remarks")		✓		
If agricultural land is being acquired, specify the following:		✓		
Agriculture related impacts		✓		
Crops and vegetables (specify types and cropping area in "remarks").		✓		
Trees (specify number and types in "remarks").		✓		
Others (specify in "remarks").		✓		
Affected Persons (APs)		✓		
Will any people be displaced from the land when acquired? Yes/No		✓		
Number of APs		✓		
Males		✓		
Females		✓		
Titled land owners		✓		
Tenants and sharecroppers		✓		

Environment & Social Management Plan (ESMP)

SECTION 1	Yes	No	Expected	Remarks
Leaseholders		✓		
Agriculture wage laborers		✓		
Encroachers and squatters (specify in remarks column)		✓		
Vulnerable APs (e.g. women headed households, minors and aged, orphans, disabled persons and those below the poverty line). Specify the number and vulnerability in "remarks".		✓		
Others (specify in "remarks")		✓		
How will people be affected?		✓		

Environmental & Social Screening Checklist (Laying of New Water Supply Line at 3 Marla Abadi near Khurram Pura)

Screening Questions	Yes	No	Remarks
A. Project Siting			
Is the Sub-Project area adjacent to or within any of the following:			
Environmentally sensitive areas?			
Legally protected Area		<input type="checkbox"/>	No legally protected area lies in the sub-project area
Any surface water body (river, canal, stream, lake, wetland) within 250 meter of the proposed sub project		<input type="checkbox"/>	No surface water body present in 250 meter of the subproject
Estuarine		<input type="checkbox"/>	No estuarine present in sub-project area
Special area for protecting biodiversity		<input type="checkbox"/>	No such area found near sub-project site
Buffer zone of protected area		<input type="checkbox"/>	No buffer zone of environmentally protected area present near sub-project site
Mangroves Forest		<input type="checkbox"/>	No mangroves forest present in sub-project area
Man-made forest /game reserve, orchid /crops or any other area of environmental importance		<input type="checkbox"/>	No man-made forest /game reserve, orchid /crops or any other area of environmental importance present along sub-project site
Socially sensitive / important areas/ communities/ people?			
Physical Cultural Resources (PCRs) and or any site of cultural/ religious importance (Graveyard, Shrine, Mosque, Church, <i>Gordwarah</i> , Temple, Fort, archeological/ historical site) within 100 m of the proposed subproject		<input type="checkbox"/>	No PCR present in the vicinity of sub-project area,
Sensitive receptors (Schools, colleges, hospitals and clinics) within 100 meter of the proposed sub project		<input type="checkbox"/>	No sensitive receptors are observed along subproject site
Any graveyard of local community (Muslims or Christians)		<input type="checkbox"/>	A Christian graveyard is present in the vicinity of subproject area. The sanctity of the graveyard

Environment & Social Management Plan (ESMP)

			will be observed during project activities and no impacts are anticipated to affect the graveyard during construction activities.
Any demographic or socio-economic aspects of the subproject area that are already vulnerable (e.g., high incidence of marginalized populations, rural-urban migrants, illegal settlements, squatters, ethnic minorities, people with disabilities, people in old age, socially isolated segments ¹³ of the society and women or children)?		<input type="checkbox"/>	No vulnerable demographic or socio-economic aspects found in the sub-project area
Already existing infrastructure (including public amenities) which may be required to dismantle or may be affected temporarily by any means?		<input type="checkbox"/>	As the sub-project activities will be executed on government land so no public amenities will be disturbed/ dismantled
B. Potential Environmental Impacts Will the Sub			
1. Disturbance to habitats/ biodiversity of environmentally sensitive or protected areas?		<input type="checkbox"/>	No environmentally sensitive or protected area present in the sub-project area
2. Cutting of trees?		<input type="checkbox"/>	No cutting of trees will be required during execution of the sub-project
3. Disruption to habitats/ biodiversity of surrounding ecosystem/ environment?		<input type="checkbox"/>	Project activities include laying of 3 inch new supply line in 3 Marla Abadi and will not have any impact on habitat or biodiversity of surrounding environment
4. Generation of wastewater during construction or operation?		<input type="checkbox"/>	No waste water will be generated during laying of new supply lines.
5. Pollution of surface water/ground water due to wastewater discharge from construction site or due to direct/indirect disposal of wastewater?		<input type="checkbox"/>	No surface water body exists near project site, whereas project activities will not have any impact on ground water quality, therefore such impact is not anticipated.
6. Alteration of surface water hydrology of waterways resulting in increased sediment in streams/ rivers or due to increased soil erosion at construction site?		<input type="checkbox"/>	No surface water body exists near project site, whereas project activities will not have any impact on ground water quality, therefore such impact is not anticipated.
7. Deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction?		<input type="checkbox"/>	No surface water body exists near project site, whereas project activities will not have any impact on ground water quality, therefore such impact is not anticipated.
8. Over pumping of ground water, leading to salinization and ground subsidence?		<input type="checkbox"/>	No such impact is anticipated
9. Serious contamination of soil due to construction works?		<input type="checkbox"/>	Sub-project activities do not involve use of chemicals or lubricants, only earth material,

¹³ Due to caste, creed, religion or gender e.g. transgender

Environment & Social Management Plan (ESMP)

			pipes and valves will be used, so no serious contamination of soil is anticipated.
10. Aggravation of solid waste problems in the area?		<input type="checkbox"/>	No aggravation of solid waste problems in the area is anticipated. The excavated earth material will be collected and reused or disposed of at designated place approved by supervision consultant.
11. Generation of hazardous waste?		<input type="checkbox"/>	No hazardous chemicals will be used in project activities.
12. Increased air pollution due to sub-project construction and operation?		<input type="checkbox"/>	The subproject interventions are on small scale that will not significantly increase air pollution, except for dust emissions which will be managed by sprinkling water.
13. Noise and vibration due to sub-project construction or operation?	<input type="checkbox"/>		Increase in noise levels due to laying of new supply lines is not anticipated.
14. Creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents due to solid/ liquid?		<input type="checkbox"/>	No such impact is anticipated.
15. Use of chemicals during construction?		<input type="checkbox"/>	No chemicals will be used
C: Potential Social Impacts Will the Sub-Project cause...			
1. Impairment of historical/ cultural areas; disfiguration of landscape or potential loss/damage to Physical Cultural Resources (PCRs)?		<input type="checkbox"/>	No historical/ cultural areas or PCRs present in the sub-project area
2. Displacement or involuntary resettlement of people? (physical displacement and/or economic displacement) (If “Yes”, please also fill Involuntary Resettlement Screening Checklist)		<input type="checkbox"/>	No one will be required to be displaced or resettled due to sub-project interventions
3. Disproportionate impacts on the poor, women and children and or other vulnerable groups ⁴ (mentioned above)?		<input type="checkbox"/>	Sub-project will not cause any impact on any of the vulnerable groups
4. Temporary impediments in movements of people/ transport and animals?		<input type="checkbox"/>	Impediment in the movement of people, transport or animals is anticipated during laying of new supply lines, which will be managed by providing alternate routes during project implementation and pedestrian track will be kept clear of construction material and Traffic Management Plan (TMP) will be developed and implemented by the Contractor at site
5. Large population influx during sub-project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?		<input type="checkbox"/>	Local labor will be hired who will return to their houses after day’s work and the sub-project will not cause burden on social infrastructure and services

Environment & Social Management Plan (ESMP)

6. Social conflicts if workers from other areas are hired?		<input type="checkbox"/>	To avoid social conflicts local labor will be hired
7. Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?	<input type="checkbox"/>		There may be safety and health issues during material transportation and construction works. Contractor will be required to provide PPEs and implement HSE plan at site to avoid such hazards
8. Risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?	<input type="checkbox"/>		There may be safety issues during material transportation and construction activities. Health and safety SOPs will have to be implemented
9. Community safety risks due to both accidental and natural causes, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?	<input type="checkbox"/>		There may be safety issues due to excavation of streets, which will be not more than 1-2 feet. Barricade tape will be installed around excavated area and safety/ caution sign boards will be installed to keep the vulnerable group of community specially women and children away from project site. Before the start of day's work construction schedule will be discussed with the residents so that residents could make the necessary arrangements accordingly. Health and safety SOPs will have to be implemented
10. Any impact on sensitive receptors (mentioned above)		<input type="checkbox"/>	No sensitive receptors present along sub-project area therefore no such impacts are anticipated
11. Any impact of negative nature on already existing infrastructure including public amenities		<input type="checkbox"/>	No public amenities or infrastructure within RoW of the subproject area

Involuntary Resettlement Checklist

(Laying of New Water Supply Line at 3 Marla Abadi near Khurram Pura)

SECTION 1	Yes	No	Expected	Remarks
Does the project require land acquisition? Yes/No		✓		
If yes, then describe the type of land being acquired from the categories below:				
Has Any AED been conducted at the proposed location by the government Yes/No		✓		
Land (Quantify and describe types of land being acquired in "remarks column".		✓		
Government and LG owned land free of occupation (agriculture or settlement)	✓			
Government or state-owned land (other than LG) free of occupation (agriculture or settlement)		✓		
Private land		✓		
Residential		✓		
Commercial		✓		
Agricultural		✓		
Communal		✓		
Others (specify in "remarks").		✓		
Name of owner/owners and type of ownership document if available.		✓		
If land is being acquired, describe any structures constructed on it		✓		
Land-based assets:		✓		
Residential structures		✓		
Commercial structures (specify in "remarks")		✓		
Community structures (specify in "remarks")		✓		
Agriculture structures (specify in "remarks")		✓		
Public utilities (specify in "remarks")		✓		
Others (specify in "remarks")		✓		
If agricultural land is being acquired, specify the following:		✓		
Agriculture related impacts		✓		
Crops and vegetables (specify types and cropping area in "remarks).		✓		
Trees (specify number and types in "remarks").		✓		
Others (specify in "remarks").		✓		

Environment & Social Management Plan (ESMP)

SECTION 1	Yes	No	Expected	Remarks
Affected Persons (APs)		✓		
Will any people be displaced from the land when acquired? Yes/No		✓		
Number of APs		✓		
Males		✓		
Females		✓		
Titled land owners		✓		
Tenants and sharecroppers		✓		
Leaseholders		✓		
Agriculture wage laborers		✓		
Encroachers and squatters (specify in remarks column)		✓		
Vulnerable APs (e.g. women headed households, minors and aged, orphans, disabled persons and those below the poverty line). Specify the number and vulnerability in "remarks".		✓		
Others (specify in "remarks")		✓		
How will people be affected?		✓		

Environmental & Social Screening Checklist (Laying of New Water Supply Lines from Chungi Chowk to Shabbir Stadium Road)

Screening Questions	Yes	No	Remarks
A. Project Siting			
Is the Sub-Project area adjacent to or within any of the following:			
Environmentally sensitive areas?			
Legally protected Area		<input type="checkbox"/>	No legally protected area lies in the sub-project area
Any surface water body (river, canal, stream, lake, wetland) within 250 meter of the proposed sub project		<input type="checkbox"/>	No surface water body present in 250 meter of the subproject
Estuarine		<input type="checkbox"/>	No estuarine present in sub-project area
Special area for protecting biodiversity		<input type="checkbox"/>	No such area found near sub-project site
Buffer zone of protected area		<input type="checkbox"/>	No buffer zone of environmentally protected area present near sub-project site
Mangroves Forest		<input type="checkbox"/>	No mangroves forest present in sub-project area
Man-made forest /game reserve, orchid /crops or any other area of environmental importance		<input type="checkbox"/>	No man-made forest /game reserve, orchid /crops or any other area of environmental importance present along sub-project site
Socially sensitive / important areas/ communities/ people?			

Environment & Social Management Plan (ESMP)

Physical Cultural Resources (PCRs) and or any site of cultural/ religious importance (Graveyard, Shrine, Mosque, Church, <i>Gordwarah</i> , Temple, Fort, archeological/ historical site) within 100 m of the proposed subproject	<input type="checkbox"/>	One mosque is present in the vicinity of sub-project area, but outside the CoI (10m strip), No impacts are anticipated
Sensitive receptors (Schools, colleges, hospitals and clinics) within 100 meter of the proposed sub project	<input type="checkbox"/>	No sensitive receptors are observed along subproject site
Any graveyard of local community (Muslims or Christians)	<input type="checkbox"/>	No graveyard is present in the vicinity of subproject area
Any demographic or socio-economic aspects of the subproject area that are already vulnerable (e.g., high incidence of marginalized populations, rural-urban migrants, illegal settlements, squatters, ethnic minorities, people with disabilities, people in old age, socially isolated segments ¹⁴ of the society and women or children)?	<input type="checkbox"/>	No vulnerable demographic or socio-economic aspects found in the sub-project area
Already existing infrastructure (including public amenities) which may be required to dismantle or may be affected temporarily by any means?	<input type="checkbox"/>	As the sub-project activities will be executed on government land so no public amenities will be disturbed/ dismantled
B. Potential Environmental Impacts Will the		
1. Disturbance to habitats/ biodiversity of environmentally sensitive or protected areas?	<input type="checkbox"/>	No environmentally sensitive or protected area present in the sub-project area
2. Cutting of trees?	<input type="checkbox"/>	No cutting of trees will be required during execution of the sub-project
3. Disruption to habitats/ biodiversity of surrounding ecosystem/ environment?	<input type="checkbox"/>	Project activities include laying of 6 inch new supply line and will not have any impact on habitat or biodiversity of surrounding environment
4. Generation of wastewater during construction or operation?	<input type="checkbox"/>	No waste water will be generated during laying of new supply lines.
5. Pollution of surface water/ground water due to wastewater discharge from construction site or due to direct/indirect disposal of wastewater?	<input type="checkbox"/>	No surface water body exists near project site, whereas project activities will not have any impact on ground water quality, therefore such impact is not anticipated.
6. Alteration of surface water hydrology of waterways resulting in increased sediment in streams/ rivers or due to increased soil erosion at construction site?	<input type="checkbox"/>	No surface water body exists near project site, whereas project activities will not have any impact on ground water quality, therefore such impact is not anticipated.

¹⁴ Due to caste, creed, religion or gender e.g. transgender

Environment & Social Management Plan (ESMP)

7. Deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction?		<input type="checkbox"/>	No surface water body exists near project site, whereas project activities will not have any impact on ground water quality, therefore such impact is not anticipated.
8. Over pumping of ground water, leading to salinization and ground subsidence?		<input type="checkbox"/>	No such impact is anticipated
9. Serious contamination of soil due to construction works?		<input type="checkbox"/>	Sub-project activities do not involve use of chemicals or lubricants, only earth material, pipes and valves will be used, so no serious contamination of soil is anticipated.
10. Aggravation of solid waste problems in the area?		<input type="checkbox"/>	No aggravation of solid waste problems in the area is anticipated. The excavated earth material will be collected and reused or disposed of at designated place approved by supervision consultant.
11. Generation of hazardous waste?		<input type="checkbox"/>	No hazardous chemicals will be used in project activities.
12. Increased air pollution due to sub-project construction and operation?		<input type="checkbox"/>	The subproject interventions are on small scale that will not significantly increase air pollution, except for dust emissions which will be managed by sprinkling water.
13. Noise and vibration due to sub-project construction or operation?	<input type="checkbox"/>		Increase in noise levels due to laying of new supply lines is not anticipated.
14. Creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents due to solid/ liquid?		<input type="checkbox"/>	No such impact is anticipated.
15. Use of chemicals during construction?		<input type="checkbox"/>	No chemicals will be used
C: Potential Social Impacts Will the Sub-Project cause...			
1. Impairment of historical/ cultural areas; disfiguration of landscape or potential loss/damage to Physical Cultural Resources (PCRs)?		<input type="checkbox"/>	No historical/ cultural areas or PCRs present in the sub-project area
2. Displacement or involuntary resettlement of people? (physical displacement and/or economic displacement) (If "Yes", please also fill Involuntary Resettlement Screening Checklist)		<input type="checkbox"/>	No one will be required to be displaced or resettled due to sub-project interventions
3. Disproportionate impacts on the poor, women and children and or other vulnerable groups ⁴ (mentioned above)?		<input type="checkbox"/>	Sub-project will not cause any impact on any of the vulnerable groups
4. Temporary impediments in movements of people/ transport and animals?		<input type="checkbox"/>	Impediment in the movement of people, transport or animals is anticipated during laying of new supply lines, which will be managed by providing alternate

Environment & Social Management Plan (ESMP)

			routes during project implementation and pedestrian track will be kept clear of construction material and Traffic Management Plan (TMP) will be developed and implemented by the Contractor at site
5. Large population influx during sub-project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?		<input type="checkbox"/>	Local labor will be hired who will return to their houses after day's work and the sub-project will not cause burden on social infrastructure and services
6. Social conflicts if workers from other areas are hired?		<input type="checkbox"/>	To avoid social conflicts local labor will be hired
7. Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?	<input type="checkbox"/>		There may be safety and health issues during material transportation and construction works. Contractor will be required to provide PPEs and implement HSE plan at site to avoid such hazards
8. Risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?	<input type="checkbox"/>		There may be safety issues during material transportation and construction activities. Health and safety SOPs will have to be implemented
9. Community safety risks due to both accidental and natural causes, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?	<input type="checkbox"/>		There may be safety issues due to excavation of streets, which will be not more than 1-2 feet. Barricade tape will be installed around excavated area and safety/ caution sign boards will be installed to keep the vulnerable group of community specially women and children away from project site. Before the start of day's work construction schedule will be discussed with the local people so that they could make the necessary arrangements accordingly. Health and safety SOPs will have to be implemented
10. Any impact on sensitive receptors (mentioned above)		<input type="checkbox"/>	No sensitive receptors present along sub-project area therefore no such impacts are anticipated
11. Any impact of negative nature on already existing infrastructure including public amenities		<input type="checkbox"/>	No public amenities or infrastructure within RoW of the subproject area

Involuntary Resettlement Checklist

(Laying of New Water Supply Lines from Chungi Chowk to Shabbir Stadium Road)

SECTION 1	Yes	No	Expected	Remarks
Does the project require land acquisition? Yes/No		✓		
If yes, then describe the type of land being acquired from the categories below:				
Has Any AED been conducted at the proposed location by the government Yes/No		✓		
Land (Quantify and describe types of land being acquired in “remarks column”).		✓		
Government and LG owned land free of occupation (agriculture or settlement)	✓			
Government or state-owned land (other than LG) free of occupation (agriculture or settlement)		✓		
Private land		✓		
Residential		✓		
Commercial		✓		
Agricultural		✓		
Communal		✓		
Others (specify in “remarks”).		✓		
Name of owner/owners and type of ownership document if available.		✓		
If land is being acquired, describe any structures constructed on it		✓		
Land-based assets:		✓		
Residential structures		✓		
Commercial structures (specify in “remarks”)		✓		
Community structures (specify in “remarks”)		✓		
Agriculture structures (specify in “remarks”)		✓		
Public utilities (specify in “remarks”)		✓		
Others (specify in “remarks”)		✓		
If agricultural land is being acquired, specify the following:		✓		
Agriculture related impacts		✓		
Crops and vegetables (specify types and cropping area in “remarks”).		✓		
Trees (specify number and types in “remarks”).		✓		
Others (specify in “remarks”).		✓		

Environment & Social Management Plan (ESMP)

SECTION 1	Yes	No	Expected	Remarks
Affected Persons (APs)		✓		
Will any people be displaced from the land when acquired? Yes/No		✓		
Number of APs		✓		
Males		✓		
Females		✓		
Titled land owners		✓		
Tenants and sharecroppers		✓		
Leaseholders		✓		
Agriculture wage laborers		✓		
Encroachers and squatters (specify in remarks column)		✓		
Vulnerable APs (e.g. women headed households, minors and aged, orphans, disabled persons and those below the poverty line). Specify the number and vulnerability in "remarks".		✓		
Others (specify in "remarks")		✓		
How will people be affected?		✓		

Environmental & Social Screening Checklist (Laying of New Water Supply Lines from GPO Khanewal to Thana Ground)

Screening Questions	Yes	No	Remarks
A. Project Siting			
Is the Sub-Project area adjacent to or within any of the following:			
Environmentally sensitive areas?			
Legally protected Area		<input type="checkbox"/>	No legally protected area lies in the sub-project area
Any surface water body (river, canal, stream, lake, wetland) within 250 meter of the proposed sub project		<input type="checkbox"/>	No surface water body present in 250 meter of the subproject
Estuarine		<input type="checkbox"/>	No estuarine present in sub-project area
Special area for protecting biodiversity		<input type="checkbox"/>	No such area found near sub-project site
Buffer zone of protected area		<input type="checkbox"/>	No buffer zone of environmentally protected area present near sub-project site
Mangroves Forest		<input type="checkbox"/>	No mangroves forest present in sub-project area
Man-made forest /game reserve, orchid /crops or any other area of environmental importance		<input type="checkbox"/>	No man-made forest /game reserve, orchid /crops or any other area of environmental importance present along sub-project site
Socially sensitive / important areas/ communities/ people?			

Environment & Social Management Plan (ESMP)

Physical Cultural Resources (PCRs) and or any site of cultural/ religious importance (Graveyard, Shrine, Mosque, Church, <i>Gordwarah</i> , Temple, Fort, archeological/ historical site) within 100 m of the proposed subproject	<input type="checkbox"/>	No PCRs found near project area
Sensitive receptors (Schools, colleges, hospitals and clinics) within 100 meter of the proposed sub project	<input type="checkbox"/>	No sensitive receptors are observed along subproject site
Any graveyard of local community (Muslims or Christians)	<input type="checkbox"/>	No graveyard is present in the vicinity of subproject area
Any demographic or socio-economic aspects of the subproject area that are already vulnerable (e.g., high incidence of marginalized populations, rural-urban migrants, illegal settlements, squatters, ethnic minorities, people with disabilities, people in old age, socially isolated segments ¹⁵ of the society and women or children)?	<input type="checkbox"/>	No vulnerable demographic or socio-economic aspects found in the sub-project area
Already existing infrastructure (including public amenities) which may be required to dismantle or may be affected temporarily by any means?	<input type="checkbox"/>	As the sub-project activities will be executed on government land so no public amenities will be disturbed/ dismantled
B. Potential Environmental Impacts Will the Sub		
1. Disturbance to habitats/ biodiversity of environmentally sensitive or protected areas?	<input type="checkbox"/>	No environmentally sensitive or protected area present in the sub-project area
2. Cutting of trees?	<input type="checkbox"/>	No cutting of trees will be required during execution of the sub-project
3. Disruption to habitats/ biodiversity of surrounding ecosystem/ environment?	<input type="checkbox"/>	Project activities include laying of 6-10 inch new supply line and will not have any impact on habitat or biodiversity of surrounding environment
4. Generation of wastewater during construction or operation?	<input type="checkbox"/>	No waste water will be generated during laying of new supply lines.
5. Pollution of surface water/ground water due to wastewater discharge from construction site or due to direct/indirect disposal of wastewater?	<input type="checkbox"/>	No surface water body exists near project site, whereas project activities will not have any impact on ground water quality, therefore such impact is not anticipated.
6. Alteration of surface water hydrology of waterways resulting in increased sediment in streams/ rivers or due to increased soil erosion at construction site?	<input type="checkbox"/>	No surface water body exists near project site, whereas project activities will not have any impact on ground water quality, therefore such impact is not anticipated.

¹⁵ Due to caste, creed, religion or gender e.g. transgender

Environment & Social Management Plan (ESMP)

7. Deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction?		<input type="checkbox"/>	No surface water body exists near project site, whereas project activities will not have any impact on ground water quality, therefore such impact is not anticipated.
8. Over pumping of ground water, leading to salinization and ground subsidence?		<input type="checkbox"/>	No such impact is anticipated
9. Serious contamination of soil due to construction works?		<input type="checkbox"/>	Sub-project activities do not involve use of chemicals or lubricants, only earth material, pipes and valves will be used, so no serious contamination of soil is anticipated.
10. Aggravation of solid waste problems in the area?		<input type="checkbox"/>	No aggravation of solid waste problems in the area is anticipated. The excavated earth material will be collected and reused or disposed of at designated place approved by supervision consultant.
11. Generation of hazardous waste?		<input type="checkbox"/>	No hazardous chemicals will be used in project activities.
12. Increased air pollution due to sub-project construction and operation?		<input type="checkbox"/>	The subproject interventions are on small scale that will not significantly increase air pollution, except for dust emissions which will be managed by sprinkling water.
13. Noise and vibration due to sub-project construction or operation?	<input type="checkbox"/>		Increase in noise levels due to laying of new supply lines is not anticipated.
14. Creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents due to solid/ liquid?	<input type="checkbox"/>		No such impact is anticipated.
15. Use of chemicals during construction?		<input type="checkbox"/>	No chemicals will be used
C: Potential Social Impacts Will the Sub-Project cause...			
1. Impairment of historical/ cultural areas; disfiguration of landscape or potential loss/damage to Physical Cultural Resources (PCRs)?		<input type="checkbox"/>	No historical/ cultural areas or PCRs present in the sub-project area
2. Displacement or involuntary resettlement of people? (physical displacement and/or economic displacement) (If “Yes”, please also fill Involuntary Resettlement Screening Checklist)		<input type="checkbox"/>	No one will be required to be displaced or resettled due to sub-project interventions
3. Disproportionate impacts on the poor, women and children and or other vulnerable groups ⁴ (mentioned above)?		<input type="checkbox"/>	Sub-project will not cause any impact on any of the vulnerable groups
4. Temporary impediments in movements of people/ transport and animals?		<input type="checkbox"/>	Impediment in the movement of people, transport or animals is anticipated during laying of new supply lines, which will be managed by providing alternate routes during project implementation and pedestrian track will be kept

Environment & Social Management Plan (ESMP)

			clear of construction material and Traffic Management Plan (TMP) will be developed and implemented by the Contractor at site
5. Large population influx during sub-project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?		<input type="checkbox"/>	Local labor will be hired who will return to their houses after day's work and the sub-project will not cause burden on social infrastructure and services
6. Social conflicts if workers from other areas are hired?		<input type="checkbox"/>	To avoid social conflicts local labor will be hired
7. Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?		<input type="checkbox"/>	There may be safety and health issues during material transportation and construction works. Contractor will be required to provide PPEs and implement HSE plan at site to avoid such hazards
8. Risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?		<input type="checkbox"/>	There may be safety issues during material transportation and construction activities. Health and safety SOPs will have to be implemented
9. Community safety risks due to both accidental and natural causes, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?		<input type="checkbox"/>	There may be safety issues due to excavation of streets, which will be not more than 2-3 feet. Barricade tape will be installed around excavated area and safety/ caution sign boards will be installed to keep the vulnerable group of community specially women and children away from project site. Before the start of day's work construction schedule will be discussed with the local people so that they could make the necessary arrangements accordingly. Health and safety SOPs will have to be implemented
10. Any impact on sensitive receptors (mentioned above)		<input type="checkbox"/>	No sensitive receptors present along sub-project area therefore no such impacts are anticipated
11. Any impact of negative nature on already existing infrastructure including public amenities		<input type="checkbox"/>	No public amenities or infrastructure within RoW of the subproject area

Involuntary Resettlement Checklist

(Laying of New Water Supply Lines from GPO Khanewal to Thana Ground)

SECTION 1	Yes	No	Expected	Remarks
Does the project require land acquisition? Yes/No		✓		
If yes, then describe the type of land being acquired from the categories below:				
Has Any AED been conducted at the proposed location by the government Yes/No		✓		
Land (Quantify and describe types of land being acquired in “remarks column”).		✓		
Government and LG owned land free of occupation (agriculture or settlement)	✓			
Government or state-owned land (other than LG) free of occupation (agriculture or settlement)		✓		
Private land		✓		
Residential		✓		
Commercial		✓		
Agricultural		✓		
Communal		✓		
Others (specify in “remarks”).		✓		
Name of owner/owners and type of ownership document if available.		✓		
If land is being acquired, describe any structures constructed on it		✓		
Land-based assets:		✓		
Residential structures		✓		
Commercial structures (specify in “remarks”)		✓		
Community structures (specify in “remarks”)		✓		
Agriculture structures (specify in “remarks”)		✓		
Public utilities (specify in “remarks”)		✓		
Others (specify in “remarks”)		✓		
If agricultural land is being acquired, specify the following:		✓		
Agriculture related impacts		✓		
Crops and vegetables (specify types and cropping area in “remarks”).		✓		
Trees (specify number and types in “remarks”).		✓		
Others (specify in “remarks”).		✓		

Environment & Social Management Plan (ESMP)

SECTION 1	Yes	No	Expected	Remarks
Affected Persons (APs)		✓		
Will any people be displaced from the land when acquired? Yes/No		✓		
Number of APs		✓		
Males		✓		
Females		✓		
Titled land owners		✓		
Tenants and sharecroppers		✓		
Leaseholders		✓		
Agriculture wage laborers		✓		
Encroachers and squatters (specify in remarks column)		✓		
Vulnerable APs (e.g. women headed households, minors and aged, orphans, disabled persons and those below the poverty line). Specify the number and vulnerability in "remarks".		✓		
Others (specify in "remarks")		✓		
How will people be affected?		✓		

Environmental & Social Screening Checklist (Laying of New Water Supply Lines from Khawaja Ghareb Nawaz Road to Vicinity for new TW at Colony no 3)

Screening Questions	Yes	No	Remarks
A. Project Siting			
Is the Sub-Project area adjacent to or within any of the following:			
Environmentally sensitive areas?			
Legally protected Area		<input type="checkbox"/>	No legally protected area lies in the sub-project area
Any surface water body (river, canal, stream, lake, wetland) within 250 meter of the proposed sub project		<input type="checkbox"/>	No surface water body present in 250 meter of the subproject
Estuarine		<input type="checkbox"/>	No estuarine present in sub-project area
Special area for protecting biodiversity		<input type="checkbox"/>	No such area found near sub-project site
Buffer zone of protected area		<input type="checkbox"/>	No buffer zone of environmentally protected area present near sub-project site
Mangroves Forest		<input type="checkbox"/>	No mangroves forest present in sub-project area
Man-made forest /game reserve, orchid /crops or any other area of environmental importance		<input type="checkbox"/>	No man-made forest /game reserve, orchid /crops or any other area of environmental importance present along sub-project site
Socially sensitive / important areas/ communities/ people?			

Environment & Social Management Plan (ESMP)

Physical Cultural Resources (PCRs) and or any site of cultural/ religious importance (Graveyard, Shrine, Mosque, Church, <i>Gordwarah</i> , Temple, Fort, archeological/ historical site) within 100 m of the proposed subproject	<input type="checkbox"/>	No PCRs found near project area
Sensitive receptors (Schools, colleges, hospitals and clinics) within 100 meter of the proposed sub project	<input type="checkbox"/>	One school present in the vicinity of project site, but outside the CoI (10m strip) no major impacts are anticipated
Any graveyard of local community (Muslims or Christians)	<input type="checkbox"/>	No graveyard is present in the vicinity of subproject area
Any demographic or socio-economic aspects of the subproject area that are already vulnerable (e.g., high incidence of marginalized populations, rural-urban migrants, illegal settlements, squatters, ethnic minorities, people with disabilities, people in old age, socially isolated segments ¹⁶ of the society and women or children)?	<input type="checkbox"/>	No vulnerable demographic or socio-economic aspects found in the sub-project area
Already existing infrastructure (including public amenities) which may be required to dismantle or may be affected temporarily by any means?	<input type="checkbox"/>	As the sub-project activities will be executed on government land so no public amenities will be disturbed/ dismantled
B. Potential Environmental Impacts Will the Sub		
1. Disturbance to habitats/ biodiversity of environmentally sensitive or protected areas?	<input type="checkbox"/>	No environmentally sensitive or protected area present in the sub-project area
2. Cutting of trees?	<input type="checkbox"/>	No cutting of trees will be required during execution of the sub-project
3. Disruption to habitats/ biodiversity of surrounding ecosystem/ environment?	<input type="checkbox"/>	Project activities include laying of 4-9 inch new supply line and will not have any impact on habitat or biodiversity of surrounding environment
4. Generation of wastewater during construction or operation?	<input type="checkbox"/>	No waste water will be generated during laying of new supply lines.
5. Pollution of surface water/ground water due to wastewater discharge from construction site or due to direct/indirect disposal of wastewater?	<input type="checkbox"/>	No surface water body exists near project site, whereas project activities will not have any impact on ground water quality, therefore such impact is not anticipated.
6. Alteration of surface water hydrology of waterways resulting in increased sediment in streams/ rivers or due to increased soil erosion at construction site?	<input type="checkbox"/>	No surface water body exists near project site, whereas project activities will not have any impact on ground water quality, therefore such impact is not anticipated.

¹⁶ Due to caste, creed, religion or gender e.g. transgender

Environment & Social Management Plan (ESMP)

7. Deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction?		<input type="checkbox"/>	No surface water body exists near project site, whereas project activities will not have any impact on ground water quality, therefore such impact is not anticipated.
8. Over pumping of ground water, leading to salinization and ground subsidence?		<input type="checkbox"/>	No such impact is anticipated
9. Serious contamination of soil due to construction works?		<input type="checkbox"/>	Sub-project activities do not involve use of chemicals or lubricants, only earth material, pipes and valves will be used, so no serious contamination of soil is anticipated.
10. Aggravation of solid waste problems in the area?		<input type="checkbox"/>	No aggravation of solid waste problems in the area is anticipated. The excavated earth material will be collected and reused or disposed of at designated place approved by supervision consultant.
11. Generation of hazardous waste?		<input type="checkbox"/>	No hazardous chemicals will be used in project activities.
12. Increased air pollution due to sub-project construction and operation?		<input type="checkbox"/>	The subproject interventions are on small scale that will not significantly increase air pollution, except for dust emissions which will be managed by sprinkling water.
13. Noise and vibration due to sub-project construction or operation?	<input type="checkbox"/>		Increase in temporary noise levels due to laying of new supply lines is anticipated.
14. Creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents due to solid/ liquid?		<input type="checkbox"/>	No such impact is anticipated.
15. Use of chemicals during construction?		<input type="checkbox"/>	No chemicals will be used
C: Potential Social Impacts Will the Sub-Project cause...			
1. Impairment of historical/ cultural areas; disfiguration of landscape or potential loss/damage to Physical Cultural Resources (PCRs)?		<input type="checkbox"/>	No historical/ cultural areas or PCRs present in the sub-project area
2. Displacement or involuntary resettlement of people? (physical displacement and/or economic displacement) (If “Yes”, please also fill Involuntary Resettlement Screening Checklist)		<input type="checkbox"/>	No one will be required to be displaced or resettled due to sub-project interventions as the water supply line will be installed in the middle of streets in small residential localities whereas along the roads at existing RoW of MC in the main roads.
3. Disproportionate impacts on the poor, women and children and or other vulnerable groups ⁴ (mentioned above)?		<input type="checkbox"/>	Sub-project will not cause any impact on any of the vulnerable groups
4. Temporary impediments in movements of people/ transport and animals?		<input type="checkbox"/>	Impediment in the movement of people, transport or animals is anticipated during laying of new supply lines, which will be managed by providing alternate routes during project

Environment & Social Management Plan (ESMP)

			implementation and pedestrian track will be kept clear of construction material and Traffic Management Plan (TMP) will be developed and implemented by the Contractor at site
5. Large population influx during sub-project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?		<input type="checkbox"/>	Local labor will be hired who will return to their houses after day's work and the sub-project will not cause burden on social infrastructure and services
6. Social conflicts if workers from other areas are hired?		<input type="checkbox"/>	To avoid social conflicts local labor will be hired
7. Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?		<input type="checkbox"/>	There may be safety and health issues during material transportation and construction works. Contractor will be required to provide PPEs and implement HSE plan at site to avoid such hazards
8. Risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?		<input type="checkbox"/>	There may be safety issues during material transportation and construction activities. Health and safety SOPs will have to be implemented
9. Community safety risks due to both accidental and natural causes, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?		<input type="checkbox"/>	There may be safety issues due to excavation of streets, which will be not more than 2-3 feet. Barricade tape will be installed around excavated area and safety/ caution sign boards will be installed to keep the vulnerable group of community specially women and children away from project site. Before the start of day's work construction schedule will be discussed with the local people so that they could make the necessary arrangements accordingly. Health and safety SOPs will have to be implemented
10. Any impact on sensitive receptors (mentioned above)		<input type="checkbox"/>	No sensitive receptors present along sub-project area therefore no such impacts are anticipated
11. Any impact of negative nature on already existing infrastructure including public amenities		<input type="checkbox"/>	No public amenities or infrastructure within RoW of the subproject area

Involuntary Resettlement Checklist

(Laying of New Water Supply Lines from Khawaja Ghareb Nawaz Road to Vicinity for new TW at Colony no 3)

SECTION 1	Yes	No	Expected	Remarks
Does the project require land acquisition? Yes/No		✓		
If yes, then describe the type of land being acquired from the categories below:				
Has Any AED been conducted at the proposed location by the government Yes/No		✓		
Land (Quantify and describe types of land being acquired in "remarks column".		✓		
Government and LG owned land free of occupation (agriculture or settlement)	✓			
Government or state-owned land (other than LG) free of occupation (agriculture or settlement)		✓		
Private land		✓		
Residential		✓		
Commercial		✓		
Agricultural		✓		
Communal		✓		
Others (specify in "remarks").		✓		
Name of owner/owners and type of ownership document if available.		✓		
If land is being acquired, describe any structures constructed on it		✓		
Land-based assets:		✓		
Residential structures		✓		
Commercial structures (specify in "remarks")		✓		
Community structures (specify in "remarks")		✓		
Agriculture structures (specify in "remarks")		✓		
Public utilities (specify in "remarks")		✓		
Others (specify in "remarks")		✓		
If agricultural land is being acquired, specify the following:		✓		
Agriculture related impacts		✓		
Crops and vegetables (specify types and cropping area in "remarks).		✓		
Trees (specify number and types in "remarks").		✓		

Environment & Social Management Plan (ESMP)

SECTION 1	Yes	No	Expected	Remarks
Others (specify in "remarks").		✓		
Affected Persons (APs)		✓		
Will any people be displaced from the land when acquired? Yes/No		✓		
Number of APs		✓		
Males		✓		
Females		✓		
Titled land owners		✓		
Tenants and sharecroppers		✓		
Leaseholders		✓		
Agriculture wage laborers		✓		
Encroachers and squatters (specify in remarks column)		✓		
Vulnerable APs (e.g. women headed households, minors and aged, orphans, disabled persons and those below the poverty line). Specify the number and vulnerability in "remarks".		✓		
Others (specify in "remarks")		✓		
How will people be affected?		✓		

Environmental & Social Screening Checklist (Laying of New Water Supply Lines from Farooq-e-Azam Chowk to Girls College Road)

Screening Questions	Yes	No	Remarks
A. Project Siting			
Is the Sub-Project area adjacent to or within any of the following:			
Environmentally sensitive areas?			
Legally protected Area		<input type="checkbox"/>	No legally protected area lies in the sub-project area
Any surface water body (river, canal, stream, lake, wetland) within 250 meter of the proposed sub project		<input type="checkbox"/>	No surface water body present in 250 meter of the subproject
Estuarine		<input type="checkbox"/>	No estuarine present in sub-project area
Special area for protecting biodiversity		<input type="checkbox"/>	No such area found near sub-project site
Buffer zone of protected area		<input type="checkbox"/>	No buffer zone of environmentally protected area present near sub-project site
Mangroves Forest		<input type="checkbox"/>	No mangroves forest present in sub-project area
Man-made forest /game reserve, orchid /crops or any other area of environmental importance		<input type="checkbox"/>	No man-made forest /game reserve, orchid /crops or any other area of environmental importance present along sub-project site

Socially sensitive / important areas/ communities/ people?			
Physical Cultural Resources (PCRs) and or any site of cultural/ religious importance (Graveyard, Shrine, Mosque, Church, <i>Gordwarah</i> , Temple, Fort, archeological/ historical site) within 100 m of the proposed subproject	<input type="checkbox"/>		No PCRs found near project area
Sensitive receptors (Schools, colleges, hospitals and clinics) within 100 meter of the proposed sub project	<input type="checkbox"/>		5 private hospitals are present in the project area but outside the CoI (10m strip) no significant impact is anticipated
Any graveyard of local community (Muslims or Christians)	<input type="checkbox"/>		No graveyard is present in the vicinity of subproject area
Any demographic or socio-economic aspects of the subproject area that are already vulnerable (e.g., high incidence of marginalized populations, rural-urban migrants, illegal settlements, squatters, ethnic minorities, people with disabilities, people in old age, socially isolated segments ¹⁷ of the society and women or children)?	<input type="checkbox"/>		No vulnerable demographic or socio-economic aspects found in the sub-project area
Already existing infrastructure (including public amenities) which may be required to dismantle or may be affected temporarily by any means?	<input type="checkbox"/>		As the sub-project activities will be executed on government land so no public amenities will be disturbed/ dismantled. However, a strip of 172 square ft of tuff paver outside a private petrol pump will need to be removed temporarily and will be restored after laying of water supply line. Public consultation details are provided in the chapter 5 of ESMP
B. Potential Environmental Impacts Will the Sub			
1. Disturbance to habitats/ biodiversity of environmentally sensitive or protected areas?	<input type="checkbox"/>		No environmentally sensitive or protected area present in the sub-project area
2. Cutting of trees?	<input type="checkbox"/>		No cutting of trees will be required during execution of the sub-project
3. Disruption to habitats/ biodiversity of surrounding ecosystem/ environment?	<input type="checkbox"/>		Project activities include laying of 3 inches new supply line at 1ft depth and will not have any impact on habitat or biodiversity of surrounding environment
4. Generation of wastewater during construction or operation?	<input type="checkbox"/>		No waste water will be generated during laying of new supply lines.
5. Pollution of surface water/ground water due to wastewater discharge from construction site or due to direct/indirect disposal of wastewater?	<input type="checkbox"/>		No surface water body exists near project site, whereas project activities will not have any impact on ground water quality, therefore such impact is not anticipated.

¹⁷ Due to caste, creed, religion or gender e.g. transgender

Environment & Social Management Plan (ESMP)

6. Alteration of surface water hydrology of waterways resulting in increased sediment in streams/ rivers or due to increased soil erosion at construction site?		<input type="checkbox"/>	No surface water body exists near project site, whereas project activities will not have any impact on ground water quality, therefore such impact is not anticipated.
7. Deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction?		<input type="checkbox"/>	No surface water body exists near project site, whereas project activities will not have any impact on ground water quality, therefore such impact is not anticipated.
8. Over pumping of ground water, leading to salinization and ground subsidence?			No such impact is anticipated
9. Serious contamination of soil due to construction works?		<input type="checkbox"/>	Sub-project activities do not involve use of chemicals or lubricants, only earth material, pipes and valves will be used, so no serious contamination of soil is anticipated.
10. Aggravation of solid waste problems in the area?		<input type="checkbox"/>	No aggravation of solid waste problems in the area is anticipated. The excavated earth material will be collected and reused or disposed of at designated place approved by supervision consultant.
11. Generation of hazardous waste?		<input type="checkbox"/>	No hazardous chemicals will be used in project activities.
12. Increased air pollution due to sub-project construction and operation?		<input type="checkbox"/>	The subproject interventions are on small scale that will not significantly increase air pollution, except for dust emissions which will be managed by sprinkling water.
13. Noise and vibration due to sub-project construction or operation?	<input type="checkbox"/>		Increase in noise levels due to laying of new supply lines is anticipated however it will be localized and temporary.
14. Creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents due to solid/ liquid?		<input type="checkbox"/>	No such impact is anticipated.
15. Use of chemicals during construction?		<input type="checkbox"/>	No chemicals will be used
C: Potential Social Impacts Will the Sub-Project cause...			
1. Impairment of historical/ cultural areas; disfiguration of landscape or potential loss/damage to Physical Cultural Resources (PCRs)?		<input type="checkbox"/>	No historical/ cultural areas or PCRs present in the sub-project area
2. Displacement or involuntary resettlement of people? (physical displacement and/or economic displacement) (If "Yes", please also fill Involuntary Resettlement Screening Checklist)		<input type="checkbox"/>	Water supply line will be installed in the middle of streets in small residential localities whereas along the roads at existing RoW of MC in the main roads. No physical or economic displacement is anticipated
3. Disproportionate impacts on the poor, women and children and or		<input type="checkbox"/>	Sub-project will not cause any impact on any of the vulnerable groups

Environment & Social Management Plan (ESMP)

other vulnerable groups 4(mentioned above)?			
4. Temporary impediments in movements of people/ transport and animals?	<input type="checkbox"/>		Impediment in the movement of people, transport or animals is anticipated during laying of new supply lines, which will be managed by providing alternate routes during project implementation and pedestrian track will be kept clear of construction material and Traffic Management Plan (TMP) will be developed and implemented by the Contractor at site
5. Large population influx during sub-project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?	<input type="checkbox"/>		Local labor will be hired who will return to their houses after day's work and the sub-project will not cause burden on social infrastructure and services
6. Social conflicts if workers from other areas are hired?	<input type="checkbox"/>		To avoid social conflicts local labor will be hired
7. Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?	<input type="checkbox"/>		There may be safety and health issues during material transportation and construction works. Contractor will be required to provide PPEs and implement HSE plan at site to avoid such hazards
8. Risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?	<input type="checkbox"/>		There may be safety issues during material transportation and construction activities. Health and safety SOPs will have to be implemented
9. Community safety risks due to both accidental and natural causes, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?	<input type="checkbox"/>		There may be safety issues due to excavation of streets, which will be not more than 1 feet. Barricade tape will be installed around excavated area and safety/ caution sign boards will be installed to keep the vulnerable group of community specially women and children away from project site. Before the start of day's work construction schedule will be discussed with the local people so that they could make the necessary arrangements accordingly. Health and safety SOPs will have to be implemented
10. Any impact on sensitive receptors (mentioned above)	<input type="checkbox"/>		5 private hospitals are present in the project area but outside the CoI (10m strip) no significant impact is anticipated
11. Any impact of negative nature on already existing infrastructure including public amenities	<input type="checkbox"/>		No public amenities or infrastructure within RoW of the subproject area

Involuntary Resettlement Checklist

(Laying of New Water Supply Lines from Farooq-e-Azam Chowk to Girls College Road)

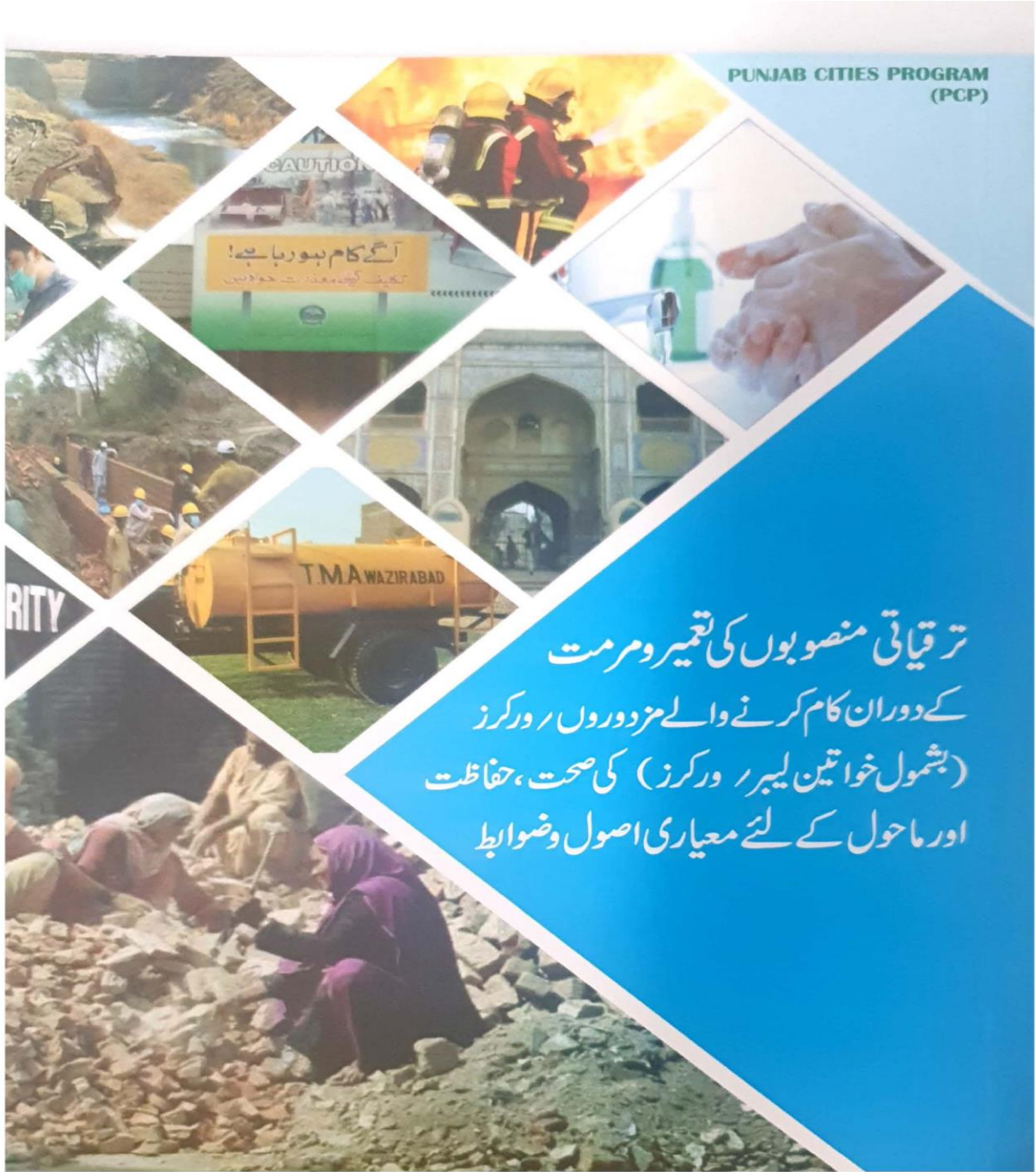
SECTION 1	Yes	No	Expected	Remarks
Does the project require land acquisition? Yes/No	✓			
If yes, then describe the type of land being acquired from the categories below:				
Has Any AED been conducted at the proposed location by the government Yes/No		✓		
Land (Quantify and describe types of land being acquired in "remarks column".				
Government and LG owned land free of occupation (agriculture or settlement)				
Government or state-owned land (other than LG) free of occupation (agriculture or settlement)		✓		
Private land	✓			Ramp of Petrol pump (Total area of tough paver which will be removed and reinstated is 153 square feet.
Residential		✓		
Commercial	✓			
Agricultural		✓		
Communal		✓		
Others (specify in "remarks").		✓		
Name of owner/owners and type of ownership document if available.	✓			Abdul rehman Jahania
If land is being acquired, describe any structures constructed on it		✓		
Land-based assets:				
Residential structures		✓		
Commercial structures (specify in "remarks")		✓		
Community structures (specify in "remarks")		✓		
Agriculture structures (specify in "remarks")		✓		
Public utilities (specify in "remarks")		✓		
Others (specify in "remarks")	✓			Ramp

Environment & Social Management Plan (ESMP)

SECTION 1	Yes	No	Expected	Remarks
If agricultural land is being acquired, specify the following:		✓		
Agriculture related impacts		✓		
Crops and vegetables (specify types and cropping area in "remarks").		✓		
Trees (specify number and types in "remarks").		✓		
Others (specify in "remarks").		✓		
Affected Persons (APs)		✓		
Will any people be displaced from the land when acquired? Yes/No		✓		
Number of APs		✓		
Males		✓		
Females		✓		
Titled land owners		✓		
Tenants and sharecroppers		✓		
Leaseholders		✓		
Agriculture wage laborers		✓		
Encroachers and squatters (specify in remarks column)		✓		
Vulnerable APs (e.g. women headed households, minors and aged, orphans, disabled persons and those below the poverty line). Specify the number and vulnerability in "remarks".		✓		
Others (specify in "remarks")		✓		
How will people be affected?		✓		

Environment & Social Management Plan (ESMP)

Annexure II: EHS SOPS for Labors/Workers (Including Women Labor/worker) for Construction of Development Project, (URDU)



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حق اشاعت

جملہ حقوق محفوظ ہیں۔

اس اشاعت کا کوئی بھی حصہ پی ایم ڈی ایف سی (PMDFC) کی پیشگی اجازت کے بغیر کسی بھی شکل میں الیکٹرانکس، مکینیکل، فوٹوکاپی، ریکارڈنگ یا کسی اور طرح سے دوبارہ بنایا یا منتقل نہیں کیا جاسکتا۔



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پیش لفظ

لوکل گورنمنٹ اینڈ کمیونٹی ڈویلپمنٹ ڈیپارٹمنٹ اور پنجاب میونسپل ڈویلپمنٹ فنڈ کمپنی (PMDFC) نے ورلڈ بینک کے اشتراک سے پنجاب سٹیٹس پروگرام (PCP) کا کامیابی سے اجرا کر دیا ہے۔ اس منصوبے کے تحت صوبہ پنجاب کے 16 چھوٹے شہروں (MCs) بشمول بہاولنگر، بوریوالا، خانیوال، کوٹ ادو، وہاڑی، گوجرہ، جھنگ، کمالیہ، اوکاڑا، ڈسکہ، حافظ آباد، جہلم، کاموکی، مردانہ اور راولپنڈی میں ترقیاتی کاموں پر کامیابی سے کام جاری ہے۔ ان ترقیاتی منصوبوں میں ویسٹ مینجمنٹ، پانی کی فراہمی، نکاسی آب، سڑکوں کی مرمت، کمیونٹی پارکس کی بحالی اور قدرتی آفات کی روک تھام کے منصوبہ جات شامل ہیں۔

پنجاب سٹیٹس پروگرام (PCP) کے منصوبہ جات کی تکمیل کے دوران سماجی اور ماحولیاتی مسائل کی جانچ پڑتال اور اس کے حل کے لئے انوائرنمنٹل اینڈ سوشل سیف گارڈز (ESSs) ٹیم نے انوائرنمنٹل اینڈ سوشل مینجمنٹ فریم ورک (ESMF) بنایا ہے۔ مختلف منصوبہ جات اسی فریم ورک کی رو سے پایہ تکمیل تک پہنچ رہے ہیں۔

تعمیراتی اور ترقیاتی کاموں کی تکمیل میں تعمیراتی جگہوں پر کام کرنے والے مزدوروں رلیبر (بشمول خواتین) کی صحت اور کام کرنے کے دوران حفاظت بہت اہمیت رکھتی ہے۔ اس اہم مسئلہ کو ملحوظ خاطر رکھتے ہوئے، پی ایم ڈی ایف سی کے زیر اہتمام پنجاب سٹیٹس پروگرام کی انوائرنمنٹل اینڈ سوشل مینجمنٹ ٹیم نے "ترقیاتی منصوبوں کی تعمیر و مرمت کے دوران کام کرنے والے مزدوروں، ورکرز (بشمول خواتین لیبر ورکرز) کی صحت، حفاظت اور ماحول کیلئے بنیادی اصول و ضوابط" مرتب کیے ہیں تاکہ متعلقہ میونسپل کمیٹی/کارپوریشنز (MCs) کے عہدیداران اور ٹھیکیداران کو آگاہی فراہم کی جائے۔



اغراض و مقاصد

۱۔ مجوزہ معیاری اصول و ضوابط پنجاب سیٹیز پروگرام (PCP) کے تحت پنجاب میونسپل ڈویلپمنٹ فنڈ کمپنی (PMDFC) کے ماہرین ماحولیات نے پروگرام ڈائریکٹر (PCP) اور ڈپٹی پروگرام ڈائریکٹر (PCP) کی زیر نگرانی تشکیل دیئے ہیں۔

۲۔ شہری ترقی کے ترقیاتی منصوبہ جات کی تعمیر و مرمت میں مزدور ورکرز بنیادی کردار ادا کرتے ہیں۔ ان (SOPs) کا بنیادی مقصد مزدور ورکرز (بشمول خواتین لیبر ورکرز) کو تعمیراتی جگہوں (Construction sites) اور لیبر کیمپس میں ماحولیاتی اور سماجی تحفظ فراہم کرنا اور صحت، ماحولیات اور کسی خطرناک صورتحال سے بچنے کے لئے حفاظت فراہم کرنا ہے۔


۳۔ یہ SOPs (PCP) پنجاب سیٹیز پروگرام کے تحت 16 شہروں کی میونسپل کمیٹیز/کارپوریشنز میں تعمیر و مرمت کے تمام پراجیکٹس پر لاگو ہوں گے۔

۴۔ یہ SOPs مزدوروں کو کام کرنے والوں کو دیہاڑی دار (بشمول خواتین) پر بلا تخصیص لاگو ہوں گے۔

۵۔ ان SOPs کو موثر اور یقینی بنانے کے لئے انھیں ٹھیکیداروں کے کنٹریکٹ کا حصہ بنانا اور ان پر عمل درآمد کرنا میونسپل کمیٹیز/کارپوریشنز کی ذمہ داری ہے۔ جسے پی ایم ڈی ایف سی کی متعلقہ پروگرام ٹیم یقینی بنائے گی۔

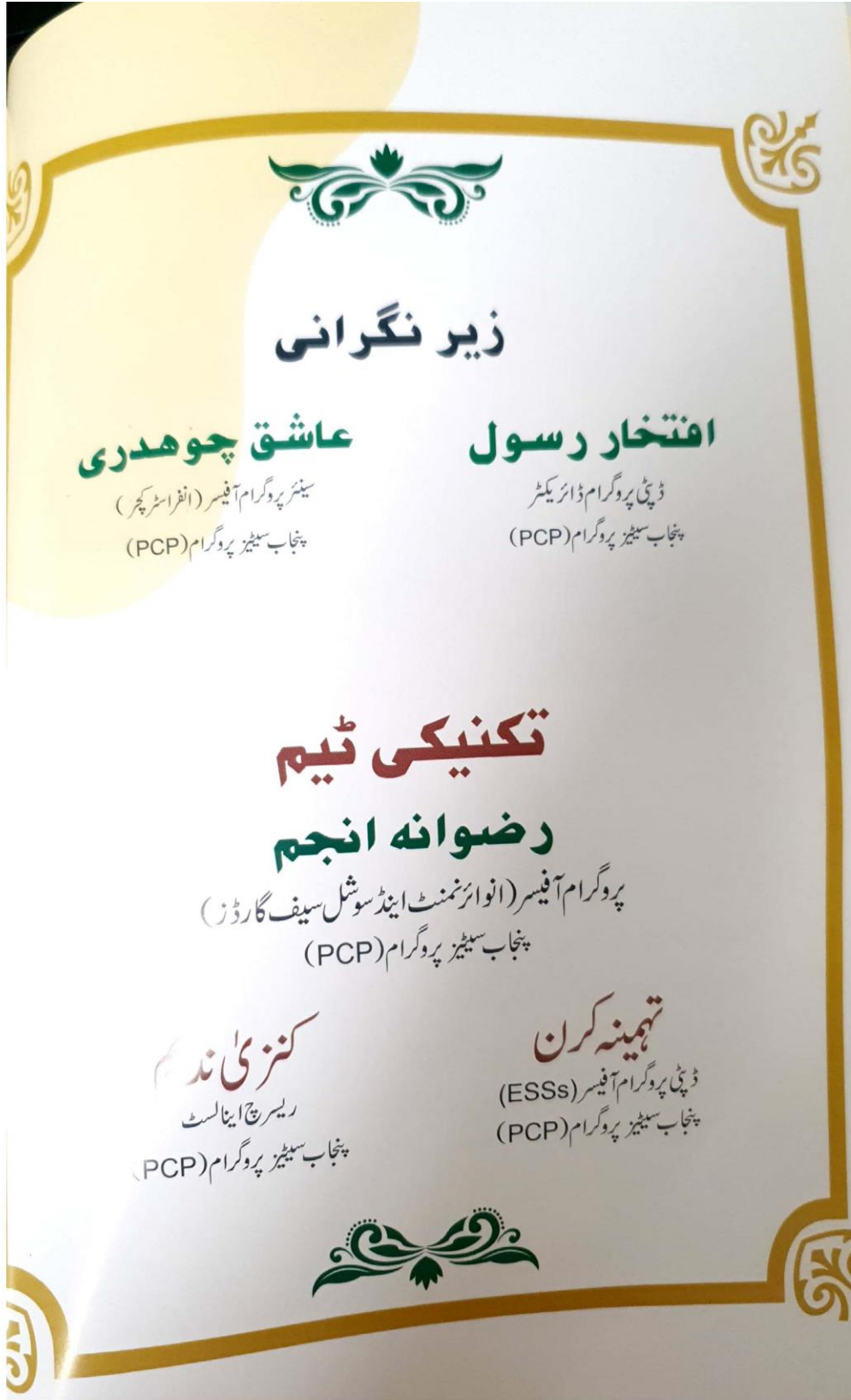
پیغام

پاکستان کی ترقی میں تعمیراتی کاموں کے دوران کام کرنے والا مزدور طبقہ نہایت اہمیت کا حامل ہے اور انکے صحت و تندرستی سے متعلق مسائل کا مؤثر حل انتہائی ضروری ہے۔ "ترقیاتی منصوبوں کی تعمیر و مرمت کے دوران کام کرنے والے مزدوروں / ورکرز (بشمول خواتین لیبر ورکرز) کی صحت، حفاظت اور ماحول کیلئے بنیادی اصول و ضوابط" کی اشاعت و ترویج اور ان پر بروقت عمل درآمد بے حد ضروری ہے جس سے اس طبقے کے بنیادی حقوق کا تحفظ یقینی بنایا جاسکے گا اور اس طرح اس طبقے کی کارکردگی میں بھی بہتری نظر آئے گی۔ ان اصولوں کے تحت ہر ٹھیکیدار کو ورکرز کی صحت اور حفاظت کی ذمہ داری دی گئی ہے۔ مزدور تعمیراتی کاموں کے دوران خطرات کے مطابق ذاتی حفاظتی سامان بھی استعمال کریں گے جس سے دوران کام حادثات میں بھی نمایاں کمی نظر آئے گی۔ ماحولیات اور صحت کے اصولوں کو مد نظر رکھتے ہوئے ہر سطح پر ہم اس بات کو یقینی بنانے کی کوشش کریں گے کہ ہماری پالیسیاں اور طرز عمل فعال ہوں۔ ماحولیات، صحت اور حفاظت (EHS) کے اصولوں کو اپنانے میں کسی بھی قسم کا سمجھوتہ نہیں کیا جائے گا۔ میں امید کرتا ہوں کہ ان اصول و ضوابط کی روشنی میں مزدور ورکرز (بشمول خواتین لیبر) کے حقوق کی پاسداری کو ایک نیا رخ ملے گا اور حکومتی عہدیداران اور ٹھیکیداران بھی اپنی ذمہ داریوں کا احساس کریں گے۔ اور اس سلسلے میں پی ایم ڈی ایف سی اور پنجاب سٹیٹیز پروگرام کی انوائرنمنٹ اینڈ سوشل سیف گارڈز (ESSs) ٹیم بلاشبہ مبارکباد کی مستحق ہے اور یہ توقع کی جاسکتی ہے کہ وہ مستقبل میں ان قواعد و ضوابط کی نگرانی کے لئے بھرپور اقدامات کریں گے۔



محمد عامر نذیر
 پروگرام ڈائریکٹر
 پنجاب سٹیٹیز پروگرام (PCP)

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(۱) لیبر کیمپس کے لئے معیاری اصول و ضوابط

سرگرمیاں

۱. مزبور / لیبر کیلئے عارضی کیمپ / رہائش گاہ کے انتظام و قیام کے لئے جگہ کا انتخاب




مسائل

- مقامی آبادی کے مسائل پر اضافی بوجھ
- مقامی آبادی سے تنازعات کا خدشہ
- سماجی، مذہبی، اور سیورٹی کے مسائل۔

حفاظتی اقدامات


ٹھیکیدار لیبر کیمپس کے قیام کے وقت مندرجہ ذیل باتوں کا خیال رکھے گا:

- کیمپس ایسی جگہوں پر لگائے جائیں جو ماحولیاتی، مذہبی، سماجی اور ثقافتی نقطہ نظر سے قابل قبول ہوں۔
- مقامی آبادی کے ساتھ کسی تنازعہ سے بچنے کے لئے آبادی سے دور جگہ کا انتخاب کیا جائے
- لیبر کیمپ کی جگہ اور سہولیات سے متعلق ایک تفصیلی نقشہ تیار کر کے متعلقہ میونسپل کمیٹی / کارپوریشن میں جمع کرایا جائے۔
- دیگر مقامی ادارے جیسے صحت، سیورٹی وغیرہ کو لیبر کیمپ کے مقام اور مدت کے بارے میں مطلع کیا جائے تاکہ کسی ناگہانی صورتحال سے بچا جاسکے۔
- لیبر کیمپس کے قیام کیلئے عارضی جگہ زمین کا حصول زمین کے مالک کی مرضی، طے کردہ کرایہ اور باقاعدہ تحریری معاہدے کی صورت میں کیا جائے۔
- لیبر کیمپس سے ملحقہ بنیادی سہولتوں جیسے پینے کا پانی اور نکاسی آب کے انتظامات سے ماحولیاتی آلودگی میں اضافہ نہ ہو



۲ پی ایم ڈی ایف سی

افوائرمنٹ اینڈ سوشل سیف گارڈز ٹیم



سرگرمیاں

۲. لیبر کیمپ میں مہیا کی جانے والی سہولیات

مسائل

- ◆ مناسب انفراسٹرکچر کی کمی
- ◆ بنیادی ضروریات اور سہولیات جیسے پانی اور بجلی کی فراہمی، صفائی ستھرائی کی سہولیات اور نکاسی آب کی فراہمی

حفاظتی اقدامات

تھیکیدار کیمپ سائٹس پر درج ذیل باتوں کا خیال رکھے گا:


- ◆ ہوادار اور صاف ستھری رہائش گاہ
- ◆ عارضی کمروں کیلئے ایسے میٹرل کا استعمال جو جلد آگ نہ پکڑیں۔
- ◆ نہانے، دھونے اور پانی پینے کیلئے صاف اور مناسب پانی کی فراہمی۔
- ◆ تمام مزدوروں کیلئے مناسب جگہ کی موجودگی اور محفوظ ماحولیاتی معیار۔
- ◆ صاف ستھرے واش رومز اور نکاسی آب کا مناسب انتظام۔
- ◆ خواتین لیبر کیلئے پردے اور پرائیویسی کا انتظام اور الگ کمروں کا قیام مزید براں خواتین لیبر کی موجودگی کی صورت میں اُنکے لیے علیحدہ ٹوائلٹس رومز کا انتظام۔
- ◆ بین الاقوامی معیار کے مطابق ہر دس افراد کیلئے مطلوبہ ٹوائلٹ کی سہولت کی تعداد ایک ہے۔
- ◆ اگر لیبر کیمپ طویل مدت کیلئے لگایا جانا ہو تو بارشوں، رسیلاب کے پانی سے بچنے کیلئے مناسب انتظامات کا ہونا اور نکاسی آب کی فراہمی بے حد ضروری ہے۔
- ◆ ٹوائلٹس اور عارضی رہائش گاہوں میں بجلی کی فراہمی کو یقینی بنایا جائے۔

سرگرمیاں

۳. لیبر کیمپ سے پیدا ہونے والا سالد اور لیکونڈ ویسٹ

مسائل

- ◆ نقصان اور بدبو
- ◆ صحت کے لئے نقصان
- ◆ ماحولیات کے لئے نقصان
- ◆ مقامی آبادی کے لئے نقصان
- ◆ بیماریاں پیدا کرنے والے بیکٹیریا اور مچھروں کا ذریعہ



انوائٹمنٹ اینڈ سوشل سیف گارڈ ٹیم

پی ایم ڈی ایف سی

حفاظتی اقدامات

- ◆ روزمرہ پیدا ہونے والے کوڑا کرکٹ اور کچن کے کوڑا کرکٹ کے لیے الگ الگ کوڑا دانوں کا انتظام
- ◆ میونسپل کمیٹی رکارپوریشن کی جانب سے منتخب کردہ جگہ پر روزانہ کی بنیاد پر کوڑے کو اٹھانے اور تلف کرنے کا مناسب انتظام۔
- ◆ عارضی ٹوائلٹس سے پیدا شدہ فضلے اور ٹیکو پیلو ایسٹ کو حفظان صحت کے اصولوں کے مطابق ٹھکانے لگانے کا انتظام۔
- ◆ فضلے کو ٹھکانے لگانے کے لیے رہائش گاہ سے کم از کم 500 میٹر دور جگہ کا انتخاب کیا جائے جس کے ارد گرد لوگوں کی رہائش نہ ہو۔
- ◆ عارضی ٹوائلٹس سے پیدا شدہ فضلے کو ٹھکانے لگانے کے لیے منتخب کردہ جگہ کے ارد گرد باڑا لگائی جائے یا درخت لگا دے جائیں تاکہ بچے اور دیگر رہائشی داخل نہ ہوں اور مچھر اور بدبو بھی پیدا نہ ہو۔

سرگرمیاں

۴۔ کھانا پکانے کے لیے ایندھن کی فراہمی

مسائل

- ◆ گیس اور دیگر ایندھن سے چلنے والے چولہوں کے پھٹنے کا اندیشہ
- ◆ ایندھن کے لیے لکڑی کے حصول کے لیے درختوں کی کٹائی

حفاظتی اقدامات

تھیکیدار کیمپ سائٹس پر درج ذیل سہولیات مہیا کرے گا۔

- ◆ لیبر کیمپس میں کھانا پکانے، کمروں کو گرم رکھنے نیز سردیوں میں نہانے اور دھونے کے لیے گرم پانی کے لیے ایندھن کی لکڑی یا دیگر بایو گیس استعمال کرنے کی حوصلہ شکنی کریں اور ایندھن کیلئے درختوں کی کٹائی نہ کریں۔
- ◆ درختوں اور ارد گرد جنگلات کی حفاظت کیلئے مزدوروں لیبر کو آگاہی دی جائے۔
- ◆ کھانا پکانے کے لیے قدرتی گیس یا مٹی کے تیل کے محفوظ چولہے استعمال کیے جائیں۔



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سرگرمیاں
5. جانوروں / پرندوں کا شکار خرید و فروخت

مسائل
 ◆ جنگلی حیات کو خطرات
 ◆ ماحولیاتی وسائل کو خطرات

حفاظتی اقدامات
 ◆ لیبر مزدوروں کو گاہی فراہم کی جائے کیونکہ ارد گرد موجود کسی بھی قسم کی جنگلی حیات کو نقصان پہنچانا، ان کے گھونسلوں پر پناہ گاہوں میں کوئی مداخلت کرنا، شکار کرنا یا جانوروں / پرندوں کو قید کرنا اور خرید و فروخت کرنا، پنجاب وائلڈ لائف (پروفیکشن، پریزرویشن، کنزرویشن اینڈ مینجمنٹ ایکٹ 1974) کے مطابق ممنوع اور سرقابل تعزیر جرم ہے۔

سرگرمیاں
6. حفظان صحت کے اصول

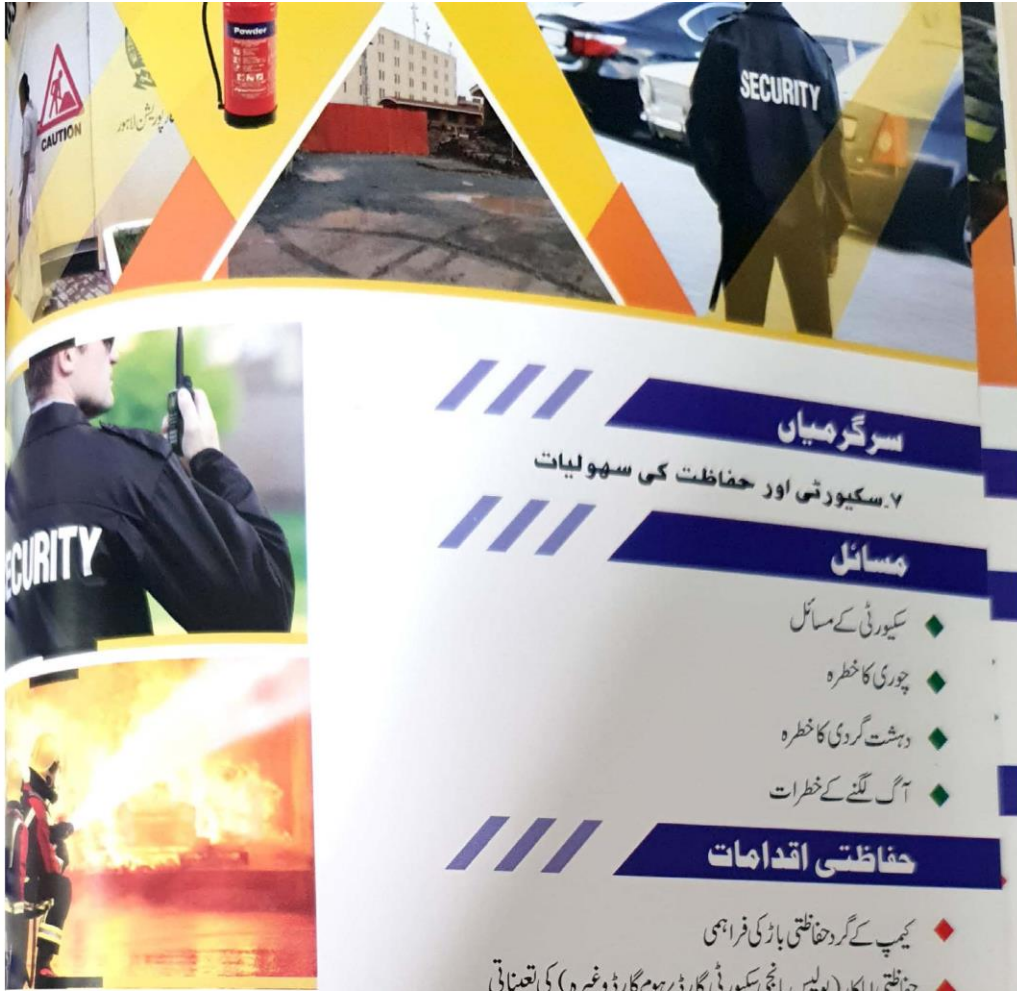
مسائل
 ◆ حفظان صحت کے رہنما اصولوں پر عملدرآمد کرنے کی صورت میں مختلف بیماریاں مثلاً کرونا وائرس، بلینڈ، ایچ آئی وی ایڈز اور دیگر انفیکشنز کے پھیلنے کا خوف

حفاظتی اقدامات
 ◆ ٹھیکیدار لیبر کیمپس میں درج ذیل انتظامات مہیا کرے گا:
 ◆ لیبر کیمپس میں صحت و صفائی کی مناسب سہولیات کی فراہمی
 ◆ بیرونی علاقوں سے آنے والے مزدوروں کی صحت کی ابتدائی سکریننگ

9. پی ایم ڈی ایف سی
 انوائرنمنٹ اینڈ سوشل سیف گارڈز ٹیم

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- ◆ چوبیس گھنٹے لیبر کیسپس میں پرفرسٹ ایڈکس کی سہولت موجود ہو۔ کیپ سائنس میں ابتدائی طبی امداد سے متعلقہ دواؤں کا موجود ہونا یقینی بنایا جائے۔ اور طویل المدتی کیسپ کی صورت میں کسی ڈپنسر رڈ ایکٹر کا کیپ میں موجود ہونا چاہیے۔
- ◆ کسی ایمرجنسی کے دوران مزدوروں کے لیے ایبویٹنس کی سہولت فراہم کی جائے اور ایمرجنسی سروسز 1122 یا 15 پر کال کرنے کے لیے ٹیلیفون نمونہ کی سہولت مہیا کی جائے۔
- ◆ حفظانِ صحت کے بہترین اصولوں، صفائی ستھرائی اور صحت کی دیکھ بھال کے امور کیلئے مزدوروں/لیبر کو تربیت فراہم کی جائے جس میں تمام مزدوروں کی شرکت کو یقینی بنایا جائے۔
- ◆ جنسی طور پر منتقل ہونے والی بیماریوں اور ایڈز وغیرہ کے بارے میں مزدوروں کو مکمل معلومات فراہم کی جائیں اور ان بیماریوں سے بچنے کے لیے حفاظتی اصول اپنانے پر زور دیا جائے۔
- ◆ چھڑوں اور دیگر بیکٹیریا کو پیدا ہونے سے روکنے کیلئے حفاظتی سپرے لازمی کرائے جائیں۔
- ◆ کروٹا سے بچنے کے لیے ابتدائی سکریننگ یقینی بنائیں اور بار بار ہاتھ دھونے پر زور دیں اور علامات ظاہر ہونے پر فوری طور پر دیگر مزدوروں سے آکولیشن کے مکمل اصولوں پر سختی سے عمل کیا جائے۔
- ◆ لیبر کیسپس کے اندر مناسب مقامات پر حفظانِ صحت کے اصولوں سے متعلقہ پیغامات اور طریقے ڈسپلے کیے جائیں اور ترقیاتی پروگرام کا اہتمام کیا جائے۔
- ◆ قریبی ڈسپینسری/ہسپتال/کلینک/ہسپتال کے رابطہ نمبر وغیرہ واضح مقامات پر آویزاں کئے جائیں۔



سرگرمیاں

۷. سکیورٹی اور حفاظت کی سہولیات

مسائل

- ◆ سکیورٹی کے مسائل
- ◆ چوری کا خطرہ
- ◆ دہشت گردی کا خطرہ
- ◆ آگ لگنے کے خطرات

حفاظتی اقدامات

- ◆ کیپ کے گرد حفاظتی باڑی فراہمی
- ◆ حفاظتی الہکار (پولیس یا نجی سکیورٹی گارڈز، ہوم گارڈ وغیرہ) کی تعیناتی
- ◆ کیپ میں موجود افراد کی صحیح تعداد اور آمدورفت کا حساب کتاب رکھنے کے لیے رجسٹر میں اندراج۔
- ◆ آگ سے بچاؤ کے لیے لیبر کیپ بنانے میں ایسا کوئی میٹیریل استعمال نہ کیا جائے جس سے آگ لگنے کا اندیشہ ہو۔
- ◆ بارش، طوفان، سیلاب وغیرہ سے بچنے کیلئے اس بات کو یقینی بنایا جائے کہ کیپ سائٹ اور عارضی کمرے رہائش گاہیں محفوظ رہیں۔
- ◆ لیبر کیپس میں آگ بجھانے والی آلات موجود ہوں جن پر انکی آخری معیاد کی تاریخ درج ہو۔ اور سکیورٹی گارڈ یا لیبر وغیرہ میں سے نصابی افراد کو آگ بجھانے والے آلہ استعمال کرنے کی تربیت دی جائے۔
- ◆ لیبر کیپ میں واضح مقامات پر ہنگامی ایمر جنسی رابطہ نمبر نمایاں درج ہوں۔
- ◆ ٹھیکیدار، لیبر کے ساتھ ماہانہ میٹنگز میں ایمر جنسی کی صورت میں ہر ایک مزدور کو اسکی ذمہ داریوں اور تربیت سے آگاہ کرے اور اسکی تفصیلات کنسلٹنٹ اور میونسپل کمیٹی/کارپوریشن کو فراہم کرے۔ اور کسی بھی قسم کی شکایات ایک رجسٹر میں درج کرے۔

پی ایم ڈی ایف سی

انوائٹمنٹ اینڈ سوشل سیف گارڈز

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سرگرمیاں

۸. حفظانِ صحت کے اصولوں پر مبنی خوراک (Food Safety)

مسائل

- ◆ نوڈ پوائزنگ کا خدشہ
- ◆ بیماری کا ڈر

حفاظتی اقدامات

- ◆ مزدوروں کو صاف ستھرے اور تازہ کھانے کی فراہمی کو یقینی بنایا جائے۔

سرگرمیاں

۹. مذہبی و سماجی میل جول

مسائل

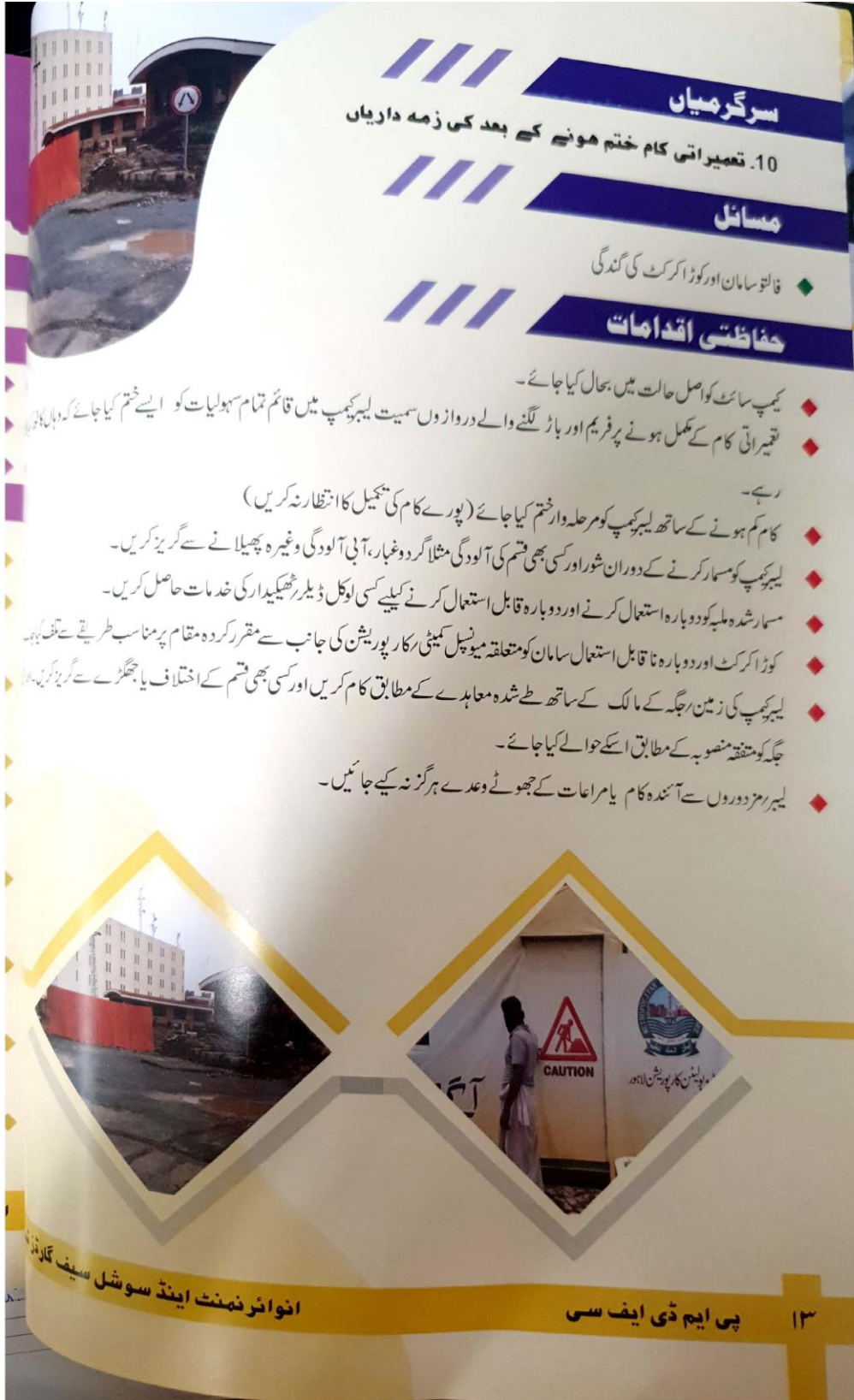
- ◆ مذہبی عبادات میں رکاوٹ
- ◆ سماجی تعلقات میں دشواری
- ◆ سماجی، ثقافتی اور مذہبی خیالات میں شدت پسندی یا لڑائی جھگڑا وغیرہ

حفاظتی اقدامات

- ◆ مزدوروں ریلیبر کو ان کے مذہب اور فرقے کے مطابق مذہبی عبادات کی سہولیات فراہم کرنا۔
- ◆ خواتین لیبر کی موجودگی کی صورت میں ان کے لیے علیحدہ وضو، نماز اور پردے کا اہتمام کیا جائے۔
- ◆ تمام مزدوروں کی مذہبی، ثقافتی یا فرقے کی وابستگی سے قطع نظر غیر متعصبانہ اور برابری کا سلوک کیا جائے۔
- ◆ مزدوروں کو تعمیراتی کام کے دوران نماز میں شرکت کرنے یا دیگر عبادات کی اجازت دی جائے اور اس سلسلے میں مذہبی اور سیورٹی امور کے ذمہ دار مقامی حکام کو تعمیراتی کاموں کے آغاز سے پہلے باضابطہ طور پر آگاہ کیا جائے تاکہ صحت عامہ، معاشرتی اور حفاظتی امور پر موثر نگرانی برقرار رہ سکے۔

انوائسمنٹ اینڈ سوشل سیف گارڈز ٹیم

پی ایم ڈی ایف سی ۱۲



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سرگرمیاں

۱. تمام قسم کے تعمیراتی سرگرمیاں اور کام

مسائل

- انجریز اور چوٹیں وغیرہ
- نامناسب دیکھ بھال اور بروقت امداد نہ ملنےک باعث ہلاکت
- دہشت گردی اور سکیورٹی سے متعلق خطرات

حفاظتی اقدامات

- تمام مزدوروں/لیبر سے مقامی رہین الاقوامی معیار کے مطابق مناسب حفاظتی اور قانونی ضوابط کی پیروی کروائی جائے۔
- کام کی جگہ پر ارد گرد کے علاقوں میں موجود دہشت گردی اور سکیورٹی کے خطرات کے مطابق حکمت عملی کی بروقت تیاری اور ایک محفوظ و صحت مند ماحول مہیا کیا جائے۔
- مزدوروں/لیبر کیلئے ذاتی حفاظت کے سامان (PPEs) کی فراہمی مثلاً حفاظتی جوتے، ہیلمٹ، ماسک، دستانے، حفاظتی لباس، چشمے، چبرے اور کان کی حفاظت کے سامان وغیرہ کی فراہمی
- تمام مزدوروں/لیبر کو ذاتی حفاظت کے ساز و سامان کے بارے میں مکمل آگاہی اور استعمال کے طریقے کار کے بارے تربیت کا انتظام۔
- اگر تعمیراتی کام ایک ماہ سے زائد عرصہ کیلئے جاری رہنا ہو تو تمام مدت کے لیے صحت، صفائی اور تربیت یافتہ ماحولیات کی تعیناتی کی جائے جو مزدوروں کی صحت، صفائی اور ماحولیات کے امور کی نگرانی کرے اور انھیں تربیت و آگاہی فراہم کرے۔
- تعمیراتی کاموں کے دوران کسی چوٹ لگنے/انجریز کی صورت میں مزدور/لیبر کے علاج معالجے کی سہولت مہیا کرنا اور بروقت ہسپتال/ڈسپنسری وغیرہ پہنچانا ٹھیکیدار کی ذمہ داری ہے۔
- مزید برآں دوران تعمیراتی کام کی وجہ سے لگنے والی چوٹ/انجریز کے نتیجے میں ہلاکت ہو جانے کی وجہ سے مزدور/لیبر کی انشورنس اور اس کی بروقت ادائیگی کو یقینی بنایا جائے۔
- ایمرجنسی رابطہ نمبر مثلاً ریسیو 1122 یا 15 اور دیگر قریبی ہسپتالوں/ڈسپنسری وغیرہ کے نمبر تعمیراتی جگہوں پر واضح درج ہونے چاہیں اور کال کی سہولت فراہم کی جائے۔
- شہری ترقی کے تعمیراتی منصوبہ جات کے آغاز سے قبل صحت، مذہبی امور اور شہری تحفظ/سکیورٹی فراہم کرنے والے مقامی اداروں کو آگاہ رکھا جا۔ اور اس سلسلے میں متعلقہ میونسپل کمیٹی/کارپوریشن کے تعاون سے موثر حکمت عملی تشکیل دی جائے۔

سرگرمیاں

۲. تمام قسم کی تعمیراتی سرگرمیاں اور کنسٹرکشن کے کام

مسائل

- ◆ 15 سال سے کم عمر بچوں کی صحت اور تعلیم کا نقصان
- ◆ 18 سال اور اس سے کم عمر بچوں کی صحت کا نقصان
- ◆ حاملہ مزدور عورتوں کی صحت سے متعلقہ خطرات

حفاظتی اقدامات

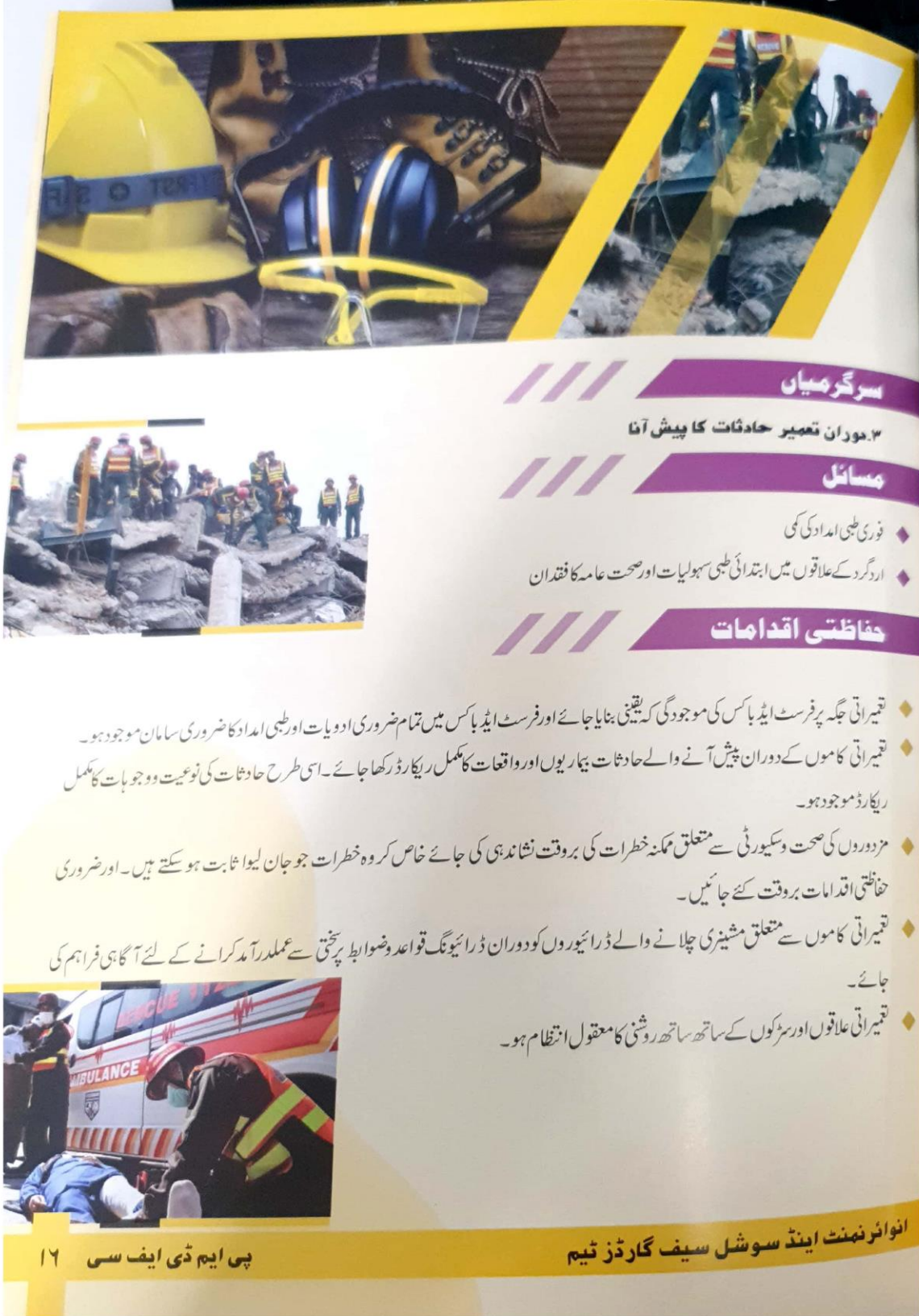
- ◆ دی پنجاب رسٹرکشن آن ایمپلائمنٹ آف چلڈرن ایکٹ 2016 کے مطابق 15 سال سے کم عمر بچوں کو مزدوری یا کسی سرگرمی کے لیے کام پر نہیں رکھا جاسکتا۔
- ◆ ویسٹ پاکستان میٹرنٹی ہینڈ آرڈیننس 1958 کے مطابق حاملہ خواتین یا ایسی خواتین جنہوں نے چھ ہفتے قبل سچے کو جنم دیا ہو، کو مزدوری یا کسی سرگرمی کے لیے کام پر نہیں رکھا جاسکتا۔
- ◆ دی پنجاب رسٹرکشن آن ایمپلائمنٹ آف چلڈرن ایکٹ 2016 کے مطابق 18 سال اور اس سے کم عمر کے بچوں کو محنت مزدوری کے ایسے کام کے لیے نہیں رکھا جاسکتا جن میں صحت کو نقصان پہنچنے یا چوٹ لگنے یا کسی کیمیائی زہریلے مادے سے نقصان پہنچنے یا جہاں ہڈی ٹوٹنے کا اندیشہ ہو۔



انوائرنمنٹ اینڈ سوشل سیف گارڈز ٹیم

پی ایم ڈی ایف سی

۱۵



سرگرمیاں

۳. دوران تعمیر حادثات کا پیش آنا

مسائل



- ◆ فوری طبی امداد کی کمی
- ◆ اردگرد کے علاقوں میں ابتدائی طبی سہولیات اور صحت عامہ کا فقدان

حفاظتی اقدامات

- ◆ تعمیراتی جگہ پر فرسٹ ایڈ باکس کی موجودگی کو یقینی بنایا جائے اور فرسٹ ایڈ باکس میں تمام ضروری ادویات اور طبی امداد کا ضروری سامان موجود ہو۔
- ◆ تعمیراتی کاموں کے دوران پیش آنے والے حادثات بیماریوں اور واقعات کا مکمل ریکارڈ رکھا جائے۔ اسی طرح حادثات کی نوعیت و وجوہات کا مکمل ریکارڈ موجود ہو۔
- ◆ مزدوروں کی صحت و سیورٹی سے متعلق ممکنہ خطرات کی بروقت نشاندہی کی جائے خاص کر وہ خطرات جو جان لیوا ثابت ہو سکتے ہیں۔ اور ضروری حفاظتی اقدامات بروقت کئے جائیں۔
- ◆ تعمیراتی کاموں سے متعلق مشینری چلانے والے ڈرائیوروں کو دوران ڈرائیونگ قواعد و ضوابط پر سختی سے عملدرآمد کرانے کے لئے آگاہی فراہم کی جائے۔
- ◆ تعمیراتی علاقوں اور سڑکوں کے ساتھ ساتھ روشنی کا معقول انتظام ہو۔

انوائس منٹ اینڈ سوشل سیف گارڈز ٹیم

پی ایم ڈی ایف سی ۱۶



سرگرمیاں

۴. تعمیراتی مقامات پر پانی اور صفائی ستھرائی کی سہولیات اور سالڈ ویسٹ مینجمنٹ

مسائل

- ♦ صحت کو خطرہ
- ♦ ارد گرد علاقے کے لوگوں کے لئے ناگواری کا باعث
- ♦ چھڑوں اور دیگر بیکٹیریا کی افزائش نسل کا ذریعہ

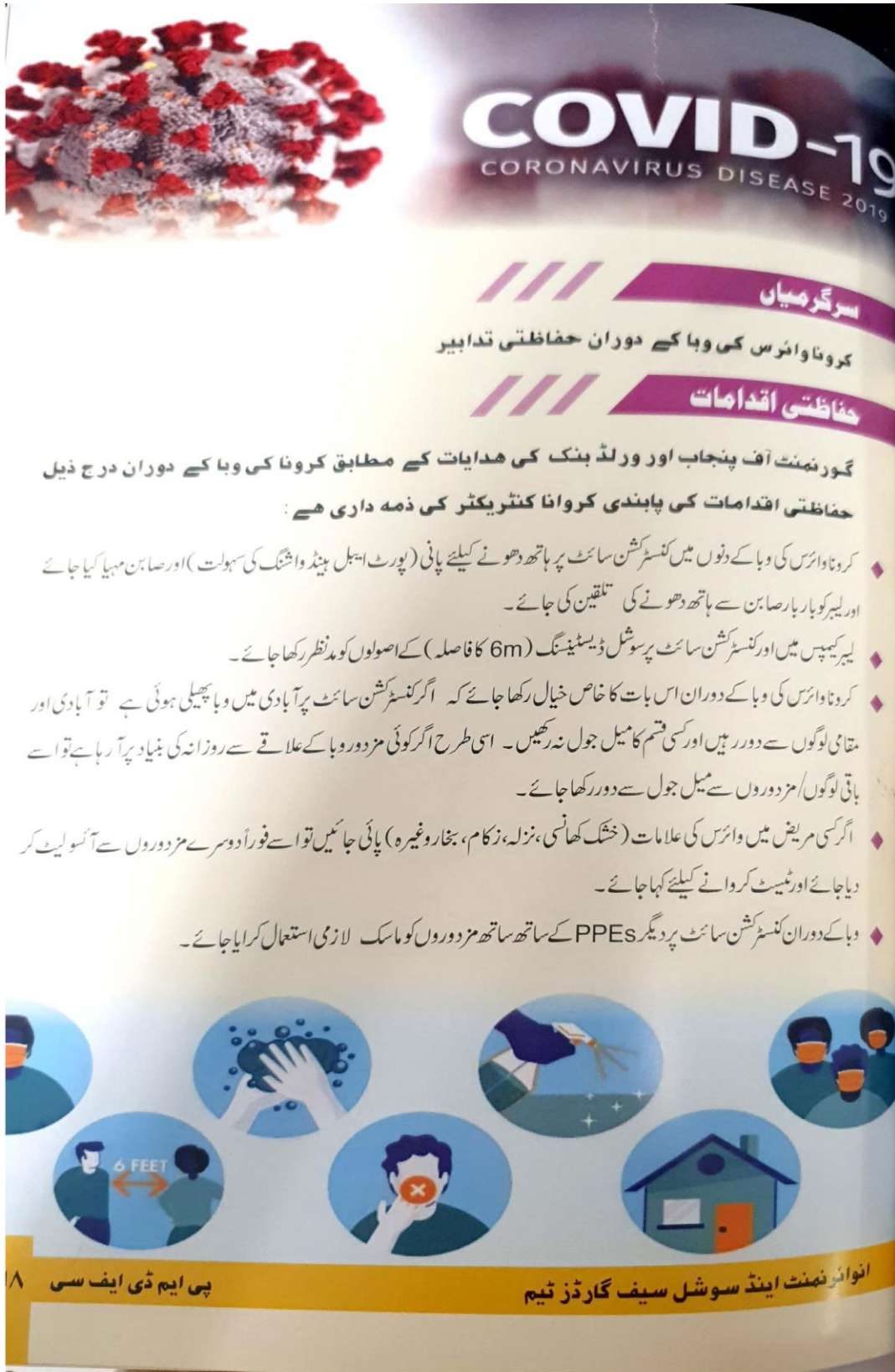
حفاظتی اقدامات

- ♦ تعمیراتی جگہوں پر تمام مزدوروں کے لئے پینے کے لئے صاف ستھرا پانی مہیا کیا جائے۔
- ♦ اگر تقریباً 25 مزدور ایک مہینہ کے لئے سارا دن کام کر رہے ہوں تو ان کے لیے تعمیراتی جگہوں پر پورٹ ایبل ٹوائلٹ کا انتظام کیا جائے جو مقامی ڈرنیج سسٹم سے ملحق ہوں اور مقامی ڈرنیج سسٹم کی غیر موجودگی میں مقامی ندی نالوں وغیرہ سے کم از کم 6 میٹر کے فاصلے پر ہوں۔ مزید برآں پورٹ ایبل ٹوائلٹس کی صفائی ستھرائی کو روزانہ کی بنیاد پر یقینی بنایا جائے۔
- ♦ تعمیراتی کاموں کے دوران کھدائی سے حاصل شدہ گارا، مٹی، ریت، کنکریٹ وغیرہ کو تعمیراتی جگہ پر ایک دن سے زائد مدت کے لئے کھلانا نہ دیا جائے۔ اور روزانہ کی بنیاد پر متعلقہ میونسپل کمیٹی کارپوریشن کی جانب سے مقرر کردہ جگہ پر مناسب طریقے سے ٹھکانے لگایا جائے۔











۷۱ پی ایم ڈی ایف سی

انوائسمنٹ اینڈ سوشل سیف گارڈز












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تعمیراتی کاموں کے دوران خطرات/حادثات سے بچنے کیلئے سامان برائے ذاتی حفاظت کا خلاصہ			
تعمیراتی کام	مقصد	تجویز کردہ سامان برائے ذاتی حفاظت	تصویریں
اڑنے والے ذرات کا استعمال جیسے پھلی ہوئی دھات مائع ٹیکسیکل، گیس، اور بخارات، روشنی کی شعاعیں۔	آنکھوں اور چہرے کی حفاظت/تحفظ	حفاظتی عینکیں	
ایسے تمام کام جن میں گرنے کا خطرہ ہو، بلندی پر کام کرنا، تعمیراتی کام کو سنبھالنے اور دوسری جگہ پر منتقل کرنے والے کام۔	سر کی حفاظت/تحفظ	اوپر اور اطراف سے نقصان سے بچاؤ کیلئے پلاسٹک کے ہیلمٹ	
کھدائی/شور پیدا کرنے والے کام یا بھاری مشینری استعمال کرنے کی وجہ سے شور۔	سماعت کی حفاظت/تحفظ	سماعت کی حفاظت کے آلہ جات جیسے کن پوٹ یا ایئر پلگ	
تمام تعمیراتی کام جن میں چیزوں کا گرنا یا گھمانا، ٹوکیلی اشیاء شامل ہوں۔ گلانے والا یا گرم مائع، پکڑے کے ڈھیر سے پکڑا اٹھانا۔	پلوں کی حفاظت/تحفظ	بلنے اور گرنے والی اشیاء، مائع اور کیمیائی مواد سے بچاؤ کیلئے حفاظتی جوتے یا بوٹ	
جسمانی صحت کیلئے نقصان دہ سامان جیسے پکڑے کو سنبھالنا، ایسے کام جس میں کاٹ یا گہرے زخم لگنے کا اندیشہ ہو، ارتعاش، بہت زیادہ درجہ حرارت۔	ہاتھوں کی حفاظت/تحفظ	ربڑ یا مصنوعی مواد (نیورو پین)، چمڑا، سٹیل، غیر موصل مواد سے بنے گلووز	
دھول، دھند، شعلے، گیس، دھواں، بخارات	تحفظ تنفس	ایک جگہ سے دوسری جگہ لے جانے والے یا ایک ہی جگہ پڑے مواد کی فراہمی تعمیراتی جگہ پر بچاؤ کا سامان	
آکسیجن کی کمی	تحفظ تنفس	چہرے کے ماسک جن میں دھول ہٹانے اور ہوا کو صاف رکھنے کیلئے (کیمیائی مواد، دھند، بخارات اور گیسوں سے) مناسب فلٹر لگے ہوں	
تمام کام جن میں شدید درجہ حرارت، نقصان دہ مواد، حیاتیاتی ایجنٹ، چھوٹے یا گہرے زخم لگنے کا اندیشہ ہو	جسم / ٹانگوں کی حفاظت/تحفظ	مناسب میٹریل سے بنے غیر موصل کپڑے، اسپرن وغیرہ	
تمام تعمیراتی کام جو 4 فٹ یا اس سے زیادہ کی اونچائی پر کے جانے ہوں بشمول سٹریٹ لائٹس وغیرہ	اونچائی پر کام کرتے ہوئے حفاظت	ہیلمٹ، حفاظتی عینکیں، ہارن کے گلووز اور بڑے کے بوٹ	
تمام تعمیراتی کام جو 4 فٹ یا اس سے زائد اونچائی پر مسلسل ایک دن کیلئے کیے جانے ہوں	اونچائی پر کام کرتے ہوئے حفاظت	اسٹیکر، ہیلمٹ، رسی، کینیکٹر، سہلے، ہارن گلووز اور ایک ساتھی فرد	

Summary of Recommended Personal Protective Equipment According to Hazard

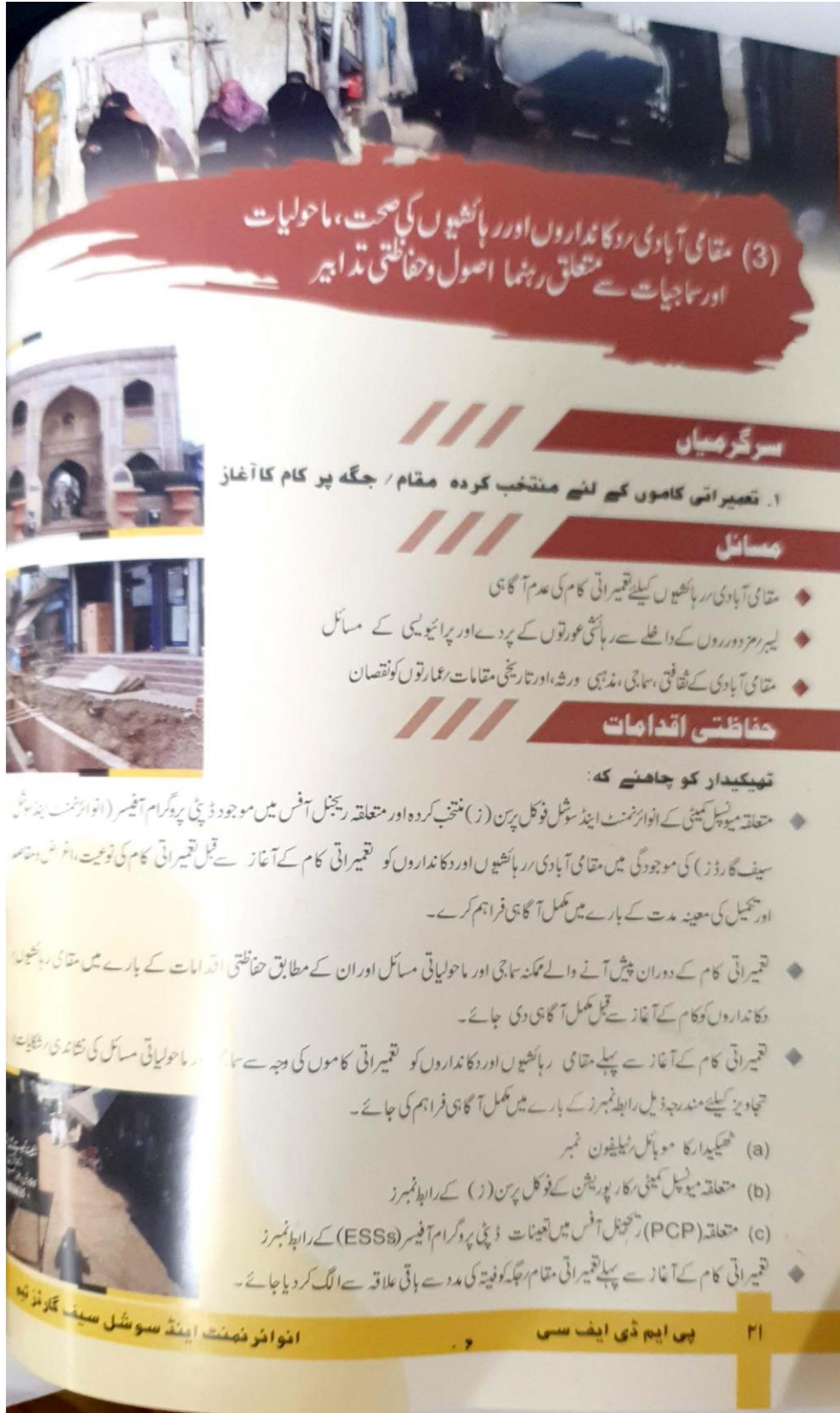
Objective	Workplace Hazards	Suggested PPE	Pictures
Eye and face protection	Flying particles, molten metal, liquid chemicals, gases or vapors, light radiation.	Safety Glasses with side-shields, protective shades, etc.	
Head protection	Falling objects, inadequate height clearance, and overhead power cords.	Plastic Helmets with top and side impact protection.	
Hearing protection	Noise, ultra-sound.	Hearing protectors (ear plugs or ear muffs).	
Foot protection	Falling or rolling objects, pointed objects. Corrosive or hot liquids.	Safety shoes and boots for protection against moving & falling objects, liquids and chemicals.	
Hand protection	Hazardous materials, cuts or lacerations, vibrations, extreme temperatures.	Gloves made of rubber or synthetic materials (Neoprene), leather, steel, insulating materials, etc.	
Respiratory protection	Dust, fogs, fumes, mists, gases, smokes, vapors.	Facemasks with appropriate filters for dust removal and air purification (chemicals, mists, vapors and gases). Single or multi-gas personal monitors, if available.	 
	Oxygen deficiency	Portable or supplied air (fixed	
Body/leg protection	Extreme temperatures, hazardous materials, biological agents, cutting and	Insulating clothing, body suits, aprons etc.	
Working at *height	Rehabilitation Projects	Helmet, Safety glasses,	
	New Construction Projects	Anchor, belt, lanyard,	

*In general, use of PPEs is required for any height of 4 ft or more. Ref: OSHA standards

پی ایم ڈی ایف سی

وائرنمنٹ اینڈ سوشل سیف گارڈز ٹیم

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تعمیراتی جگہ پر واضح بورڈ نصب کر دیئے جائیں، جن پر درج ذیل پیغامات / احکامات لکھے ہوں:

(a) تعمیراتی کام کی نوعیت

(b) ٹریک میں رکاوٹ کی صورت میں متبادل راستے کا نشان اور عارضی رکاوٹ کا پیغام

(c) الیکٹریسی اور شکایت کیلئے رابطہ نمبرز

(d) PMDFC کی جانب سے جاری کردہ سماجی و ماحولیاتی پیغامات پڑنی پوسٹرز۔

تعمیراتی کام کی جگہ کے ارد گرد 100 میٹر تک کی حدود میں موجود ثقافتی، سماجی، مذہبی ورثہ، تاریخی عمارتوں اور مذہبی مقامات جیسے قبرستان، مساجد، مندر، گرجا گھروں وغیرہ کو کسی قسم کا نقصان نہ پہنچایا جائے اور ان کی حدود میں کوڑا کرکٹ ڈالنے یا فالتو پانی چھوڑنے سے گریز کیا جائے۔ مزید برآں کھدائی کے دوران کسی نئے آثار قدیمہ ملنے کی صورت میں متعلقہ مقامی محکمے سے رجوع کیا جائے اور کھدائی کا کام بند کر کے تعمیراتی کام روک دیا جائے۔

سرگرمیاں

2- کھدائی کی جگہ اور اس سے متعلقہ کام اور خالوں کی صفائی اور اس سے حاصل شدہ بھل وغیرہ

مسائل



کھدائی سے حاصل شدہ مٹی رکنکر کے ڈھیر (Debris) سے رہائشیوں کی آمدورفت اور ٹریفک میں رکاوٹ

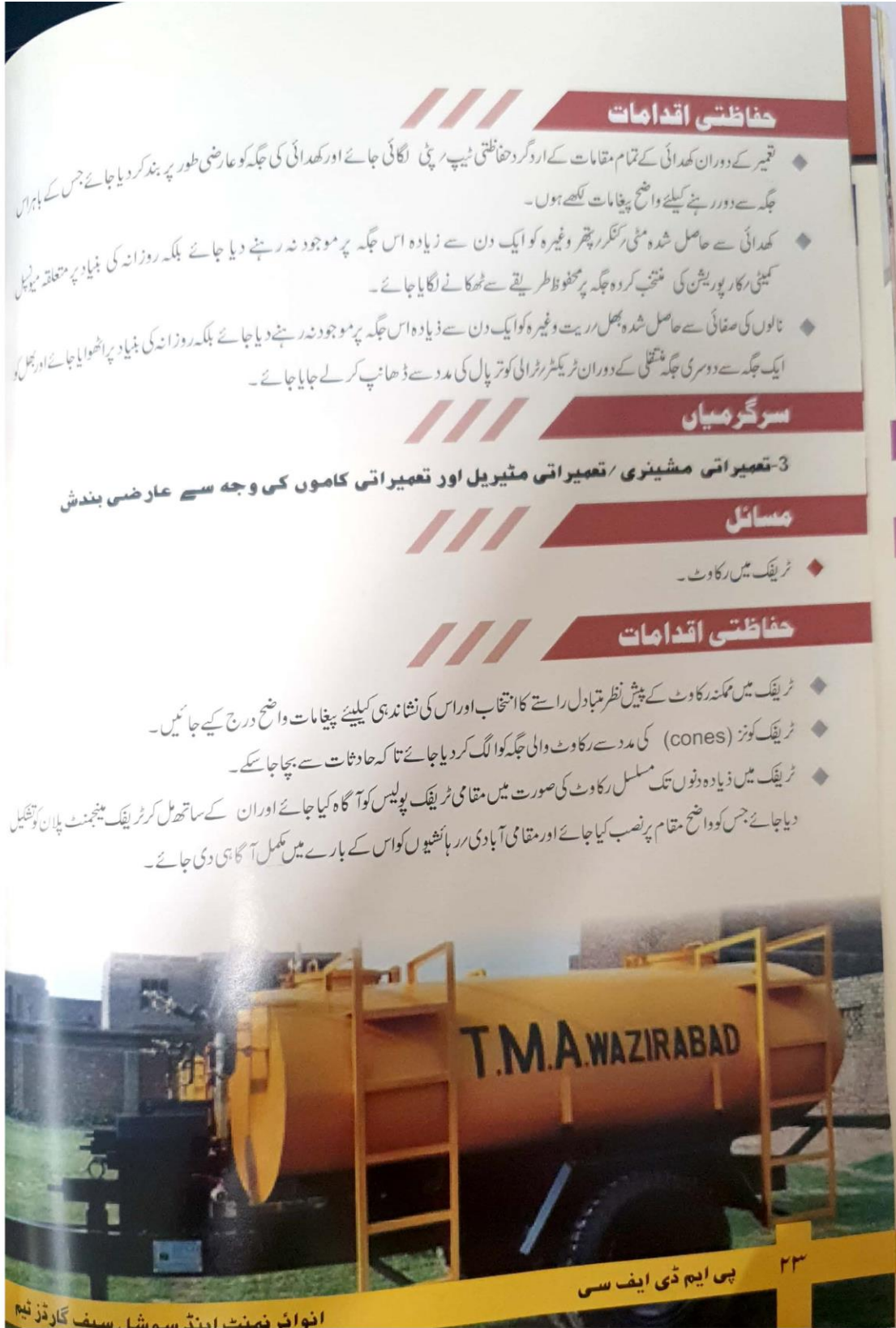
مقامی رہائشیوں کیلئے ناگواری کا باعث

چشمروں اور دیگر بیماری پھیلانے والے جراثیم کی افزائش کا ذریعہ

کھدائی کی جگہ پر گرنے اور حادثات کے خطرات

پی ایم ڈی ایف سی ۳۲

انوائسمنٹ اینڈ سوشل سیف گارڈز ٹیم



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سرگرمیاں

4- تعمیراتی کاموں کی وجہ سے راستوں میں عارضی رکاوٹ اور زمین کا عارضی حصول


مسائل

- روزمرہ معمولات اور کاموں میں رکاوٹ
- رہائشی خواتین کیلئے آنے جانے میں رکاوٹ
- دکانداروں کے دکانوں کے آگے رکاوٹیں اور گاہکوں کیلئے مشکلات
- مستقل و عارضی سائزرگا کر بیچنے والے چھوٹے بڑے مستقل دکانداروں کا گاہک کم ہوجانے کی وجہ سے مالی نقصان

حفاظتی اقدامات

- تعمیراتی علاقے میں اردگرد موجود تمام چھوٹی بڑی دکانوں، ٹھیلوں، عارضی خوانچہ فروشوں اور گھروں کا مکمل سروے (تعداد اور مالی حیثیت وغیرہ) اور ان پر ممکنہ سماجی اور ماحولیاتی اثرات کا جائزہ لے کر ایک تفصیلی رپورٹ اور متعلقہ پلان میونسپل کمیٹی رکارپوریشن کے دفتر میں موجود ہونی چاہئے جو کہ فوکل پرسنز، متعلقہ علاقائی آفس میں موجود ڈپٹی پروگرام آفیسر (ESSs) کے ساتھ تعمیراتی کاموں کی مالیت کا اندازہ لگائے وقت تیار جائیگی۔ اس رپورٹ اور پلان میں موجود سماجی اور ماحولیاتی مسائل کے حل کیلئے مختص رقم اور ان کا صحیح طریقے سے استعمال ٹھیکیدار کے کنٹریکٹ حصہ ہوگا۔
- رہائشیوں کیلئے آنے جانے اور دکانوں، گھروں تک رسائی کے لیے متبادل راستے مہیا کرنا ٹھیکیدار کی ذمہ داری ہے۔
- دکانوں، تھڑوں، ٹھیلوں وغیرہ کے باہر کسی بھی قسم کے نقصان یا توڑ پھوڑ کی صورت میں ٹھیکیدار طے شدہ ضوابط کے مطابق اس کی قیمت متاثرہ لوگوں ادا کرے گا۔
- لیبر ریزرو کو تربیت دی جائے کہ وہ اردگرد رہائشی عورتوں اور بچوں کے آنے جانے میں کوئی رکاوٹ نہ بنیں اور رہائشیوں کے ساتھ بلا ضرورت کو میل جول نہ رکھیں۔
- تعمیراتی کیمپ لگانے، تعمیراتی کام کرنے، مشینری اور تعمیراتی سامان رکھنے کے لیے عارضی طور پر حاصل کی گئی زمین کا کرایہ مالک مکان کو وقت پر ادا کی جائے گا۔ اور تحریری معاہدے کی صورت میں ٹھیکیدار تمام قواعد و ضوابط کا پابند ہوگا۔
- تعمیراتی کاموں کیلئے عارضی زمین حاصل کرنے کے لئے مقامی رہائشیوں سے مشاورت اور دنوں کے حساب سے کرایہ اور اس کا مکمل طریقہ کار وضع کر کے باقاعدہ لکھا جائے گا۔ اور خلاف ورزی کی صورت میں ٹھیکیدار ذمہ دار ہوگا۔

پی ایم ڈی ایف سی ۲۳



سرگرمیاں
5. تعمیراتی کام اور حیوی مشینری کا استعمال

مسائل

- ◆ شور و غل
- ◆ پانی کی آلودگی
- ◆ ہوائی آلودگی
- ◆ دیگر ماحولیاتی مسائل

حفاظتی اقدامات

- ◆ تعمیراتی علاقے میں موجود ہسپتالوں، سکولوں، رکالوں وغیرہ اور رہائشی گھروں، رکالوں کی تمام تفصیلات کی رپورٹ متعلقہ میونسپل کمیٹی کے دفتر میں موجود ہونی چاہئے جو کہ ٹھیکیدار کے کنٹریکٹ کا حصہ ہوگی۔ اور ٹھیکیدار ان تفصیلات کے مطابق ایسا پلان ترتیب دے گا جس سے ارد گردی کے رہائشیوں اور رکالداروں کو کم سے کم پریشانی کا سامنا کرنا پڑے مثلاً زیادہ شور پیدا کرنے والے کام دن کے اس حصے میں کئے جائیں جب ہسپتالوں، اور سکولوں، رکالوں وغیرہ کے مصروف اوقات کار نہ ہوں اور ایسے کام جن کی وجہ سے راستوں کی عارضی بندش ضروری ہوں وہ رات کو کئے جائیں جب رہائشیوں کی آمدورفت نہ ہو۔
- ◆ تعمیراتی کاموں کے دوران پیدا شدہ فاضل پانی یا پورٹیل ٹوائلٹس کا پانی رفضلہ وغیرہ کا محفوظ اور مناسب طریقے سے ٹھکانے لگانے کا بندوبست کیا جائے اور فاضل پانی کو پینے کے صاف پانی کے ساتھ شامل ہونے سے بچانے کا ہر ممکن قدم اٹھایا جائے۔
- ◆ واٹر سپلائی کی سیموں یا ایسی تمام کام جن کی وجہ سے رہائشیوں کو پانی یا سیوریج وغیرہ میں عارضی بندش کا سامنا کرنا پڑ سکتا ہو۔ ایسے تمام کاموں کے آغاز سے پہلے رہائشیوں کو پیشگی اطلاع دی جائے اور متبادل انتظامات کا خاطر خواہ انتظام کیا جائے۔
- ◆ تعمیراتی کاموں کی وجہ سے درختوں کی کٹائی سے ہر حال میں گریز کیا جائے اور ناگزیر صورت حال میں ایک درخت کی کٹائی کے متبادل کے طور پر چار درخت لگانا ضروری ہیں۔
- ◆ تعمیراتی جگہ پر پیدا ہونے والے کوڑا کرکٹ کو ٹھکانے لگانے کیلئے ڈسٹ بن لگائے جائیں اور ان کو روزانہ کی بنیاد پر متعلقہ میونسپل کمیٹی کی طرف سے مقرر کردہ مقام پر ٹھکانے لگایا جائے۔
- ◆ کوڑا کرکٹ اور فاضل پانی ارد گرد موجود فصلوں اور ندی نالوں میں پھینکنے سے گریز کریں۔
- ◆ گرد و غبار اور ہوائی آلودگی کی صورت میں پانی کا باقاعدہ چھڑکاؤ کریں۔
- ◆ تعمیراتی کام کی مدت اور نوعیت کے مطابق کام کے آغاز سے پہلے، کام کے دوران اور کام کے بعد شہری آلودگی، ہوائی آلودگی اور آبی آلودگی کے نمونہ جات حاصل کر کے ان کی جانچ پڑتال کرنا ٹھیکیدار کی ذمہ داری ہے۔ اس سلسلے میں ریجنل آفس میں موجود ڈپٹی پروگرام آفیسر (ESS) سے مزید رہنمائی حاصل کریں۔
- ◆ تعمیراتی کام مکمل ہو جانے کے بعد علاقے کی صفائی ستھرائی اور ماحولیاتی خوبصورتی کا خاص خیال رکھیں اور پہلے سے بہتر حالت میں چھوڑیں۔

* سرگرمیوں کو آف پاکستان کے سولہویں نمبر 25 برطانوی 2009 حوالہ نمبر 2009 آف فائر فائر کینال ووا ایڈیٹنگ پراجیکٹ لاہور تعمیراتی کاموں کے دوران ہر ایک درخت کی کٹائی کے متبادل چار درخت لگانے ہائیکے۔

پی ایم ڈی ایف سی ۲۵
انوائس منٹ اینٹ سوشل سیف گارڈن ٹیم

Annexure III: COVID-19 Pandemic and Health Safety Measures

Given the unprecedented nature of the COVID-19 pandemic, contractors are bound to take all necessary precautions to maintain the health and safety related measures at site and to ensure suitable arrangements regarding hygiene requirements for the prevention of pandemic.

Following are the measures that should be implemented at the construction site to avoid the spread of Covid-19:

Activities	Adaptive Measures
Pre- Execution Phase	
A. Profile preparation	<ul style="list-style-type: none"> • Detail profile of project workforce • Enlist the names, addresses and contact # • Breakdown of the workforce (workers from local community and those who have on site accommodation) • Assigning the task against each person • Schedule the key activities and their duration at site
B. Initial Screening	<ul style="list-style-type: none"> • All enlisted workforce should go through initial screening process • Ensuring the availability of Thermo gun at site • Record keeping against initial screening • Identifying all workers who are initially at more risk of contracting Covid-19
During Execution Phase	
A. Preliminary Screening	<p>Regular Screening:</p> <ul style="list-style-type: none"> • Regular screening by using Thermo gun on daily basis before starting civil work at site • Checking and recording temperatures of workers and other people entering the site or requiring self-reporting prior to or on entering the site. • If a worker has symptoms of COVID-19 (e.g. fever, dry cough, fatigue) the worker should be removed immediately from work activities and isolated on designated site. • Co-workers (i.e. workers with whom the sick worker was in close contact) should be required to stop work, and to quarantine themselves for 14 days, even if they have no symptoms. <p>Sequential Screening: Concerned DHQ medical staff is requested for screening at regular intervals. List should also be shared with DHQ for avoiding future inconvenience or hire health safety officer on weekly basis.</p>
B. Special Arrangements regarding PPEs	<ul style="list-style-type: none"> • Ensuring availability of hand washing facilities (sanitizers/soaps) at site • Presence of closed waste bins at key places throughout site, including at entrances/exits to work areas (toilet, canteen or food distribution, or provision of drinking water; in worker accommodation; at waste stations; at stores; and in common spaces). • Special arrangements regarding PPEs and sanitation at site • Record keeping of stock availability on daily basis
C. Restricted Movement/ Demobilization of staff	<ul style="list-style-type: none"> • Encourage employees to wash their hands at least for 20 seconds with soap and stay at least one meter away from people who are coughing or sneezing

	<ul style="list-style-type: none"> • Breakdown of workers who reside at home (i.e. workers from the community), workers who lodge within the local community and workers in on-site accommodation. Workers accommodated on site should be required to minimize contact with people near the site, and in certain cases be prohibited from leaving the site for the duration of their contract, so that contact with local communities is avoided. • Workers from local communities, who return home daily, weekly or monthly, will be more difficult to manage. They should be subject to health checks at entry to the site (as set out above) and at some point, circumstances may make it necessary to require them to either use accommodation on site or not to come to work. • All workers should be provided separate accommodation.
<p>D. Training sessions</p>	<ul style="list-style-type: none"> • Health and safety training for Contractor's Personnel (which include project workers and all personnel that the Contractor uses on site, including staff and other employees of the Contractor and Subcontractors and any other personnel assisting the Contractor in carrying out project activities. • Sessions related to safety procedures, use of construction PPEs, occupational health and safety issues, and code of conduct specially privacy issues including social distancing. • Arranging daily briefings with workforce, reminding workers to self-monitor for possible symptoms (fever, cough) and to report to their supervisor or the COVID-19 focal point if they have symptoms or are feeling unwell. • Placing posters and sign boards around the site in local languages. • Appointing one person on daily basis among the workforce who will serve as trainer for conducting awareness session and encouraging the rest to take preventive measures.
<p>E. Operationalization of Grievance Redress Mechanism</p>	<ul style="list-style-type: none"> • Effective implementation of GRM at site • Encouraging to report any COVID-19 related health issue and concerns about the health of their co-workers and other staff as well. • In case of unavailability of the PPEs at site, grievance would be lodged directly to PMU.
<p>F. Role of PMU</p>	<ul style="list-style-type: none"> • PMU is required to arrange regular meetings with Contractors and workforce to monitor all procedural implementation of COVID-19 prevention related mechanism. • Arrange meeting with concerned DHQs for immediate support and guidance in case of emergency. <p>During inspection visit by PMU Staff, If a worker is found to has symptoms of COVID-19, the worker should be removed immediately from work activities and isolated on designated site.</p>
<p>Post Execution Phase</p>	
<p>A. Post Screening</p>	<ul style="list-style-type: none"> • Screening should be done at the end of the day on daily basis, If a worker is found to have any symptoms of COVOD-19, he should be immediately reported to concerned health department.
<p>B. Cleaning and waste disposal</p>	<ul style="list-style-type: none"> • All waste (PPEs and sanitation related) shall be disposed off properly at designated sites.

Environment & Social Management Plan (ESMP)

Annexure IV: List of Persons Consulted

Sr. No	Name	Designation	Department
Technical Discussion			
01	Sarfraz Anjum	Assist. Director	EPA
02	Miss Sadia Akram	Junior Research Officer	Public Health Engineering
03	Dr. Iqbal Khan	Deputy Director	Agriculture
Community Consultation			
01	Zahid Mehmood	Muhammad Latif	0301-7819388
02	Muhamma Tajamul	Muhammad Afzal	0300-0731088
03	Arif	Haq Nawaz	0302-7083146
04	Abdul Jawad	Muhammad Ashraf	0300-0780755
05	Kashif	Muhammd Yousaf	0303-5128409
06	Muhammad Fahad Ali	Zahoor Ahmed	-
07	Sohail Ahmed	Hadayat Ullah	0308-4172359
08	Ghulam Murtaza	Allah Dita	0304-7193352
09	Khadim Hussain	Rajab Ali	0304-7391637
10	Fakhar Abbas	Ghulam Murtaza	0324-8115670
11	Muhammad Tariq	Muhammad Baksh	0303-2195428
12	Aman Ullah	Haji Muhammad	0304-7813389
13	Abdul Aziz	Ghulam Muhammad	0304-9100452
14	Muhammad Ramzan	Muhammad Jaffar	0308-5780194
15	Ghulam Mustafa	Allah Dad	0305-8707991
16	Ghulam Shabeer	Muhammad Ramzan	0301-3098289
17	Rehan Farid	Muhammad Ramzan	0300-7890289
18	Mubashir	Abdul Hameed	0312-6552736

Annexure V: Personal Protective Equipment According to Hazard¹⁸

Objective	Workplace Hazards	Suggested PPE
Eye and face protection	Flying particles, molten metal, liquid chemicals, gases or vapors, light radiation.	Safety Glasses with side-shields, protective shades, etc.
Head protection	Falling objects, inadequate height clearance, and overhead power cords.	Plastic Helmets with top and side impact protection.
Hearing protection	Noise, ultra-sound.	Hearing protectors (ear plugs or ear muffs).
Foot protection	Falling or rolling objects, pointed objects. Corrosive or hot liquids.	Safety shoes and boots for protection against moving & falling objects, liquids and chemicals.
Hand protection	Hazardous materials, cuts or lacerations, vibrations, extreme temperatures.	Gloves made of rubber or synthetic materials (Neoprene), leather, steel, insulating materials, etc.
Respiratory protection	Dust, fogs, fumes, mists, gases, smokes, vapors.	Facemasks with appropriate filters for dust removal and air purification (chemicals, mists, vapors and gases). Single or multi-gas personal monitors, if available.
	Oxygen deficiency	Portable or supplied air (fixed lines). On-site rescue equipment.
Body/leg protection	Extreme temperatures, hazardous materials, biological agents, cutting and laceration.	Insulating clothing, body suits, aprons etc. of appropriate materials.

¹⁸ Source: IFC Environmental, Health, and Safety (EHS) Guidelines

Annexure VI: Environmental & Social Monitoring Checklist

Sub-project: Installation of 03 No. of Tube Wells, Rehabilitation of 03 No. of OHRs and Laying of New Water Supply Lines

Proposed Sub-project activities	Potential Env./ Social Impacts	Magnitude of Impact			Mitigation Measures	Monitoring Status
		Low	Medium	High		
Construction Phase						
Dismantling, Excavation, and filling operations	<p>a) Environmental Issues:</p> <ul style="list-style-type: none"> Dust which may affect visibility Noise from machineries/ equipment Soil erosion Contamination of surface water Vibration (Shock waves can be produced due to heavy machinery working) Solid waste/ earth material/ waste water may be generated due these activities Safety hazards to labor and nearby resident population. Worse House Keeping <p>b) Social Issues:</p> <ul style="list-style-type: none"> Solid waste may cause disturbance in mobility Temporary blockage of road may restrict mobility 				<ul style="list-style-type: none"> Solid waste/ waste water will be properly disposed off at designated place of MC. Updated and tuned machinery will be used to control noise. Water sprinkling will be carried out at consecutive intervals as per instruction Avoiding construction activities during nights. Removal of excess material/ debris/waste water from the site immediately. Provide PPEs (See Annex-VI). Provide appropriate signage near the construction activities to sensitize the community and minimize accidents. Public must be informed about project major activities, duration of scheme, time and schedule, anticipated impacts and their proposed Mitigation Measures. The contact Nos. of focal person of Grievance Redress Committee will be displayed at different locations and residents will also be informed about it. Construction work will be done inside the boundary wall of Mc facility premises. In this way the business of the shops keepers will not be affected. Contractor will make sure that labor must not damage the property and structures of the 	

Environment & Social Management Plan (ESMP)

	<ul style="list-style-type: none"> • Conflict with public and public complaints • Livelihood's loss. • Temporary loss of structures and private property • Economic loss of permanent and mobile vendors due to obstruction of passage • Presence of Physical Cultural Resources (PCRs) of Archeological importance 			<p>residents. In case of damage compensation will be provided as per entitlements.</p> <ul style="list-style-type: none"> • If there will be any PCR found during excavation; Contractor will follow guidelines (Annex-VIII) of chance find procedure. 	
<p>Civil work, Laying of sewer lines/ network</p>	<p>Environmental Issues:</p> <ul style="list-style-type: none"> • Noise and vibration disturbances to residents and businesses • Road side visibility can be reduced and dusty environment leads to respiratory diseases. • Safety issues • Health problems or immediate risk may take place • Spillage of fuel and oil • Traffic jams and congestion may take place and cause inconvenience to the people where the construction will take place. • Worse House Keeping <p>Social Issues:</p> <ul style="list-style-type: none"> • Reduced pedestrian access to residences and businesses • Dissatisfaction for the project Scattered construction material may obstruct mobility. 			<ul style="list-style-type: none"> • Immediately transport the accumulated construction solid/ liquid waste to a site identified by the implementing MC • Removal of excess materials • Cleaning of sites upon completion of schemes. • Establish schedule and others specific restrictions • Limit work to day light hours as possible • Use of less noise generating equipment • Regular water sprinkling with the help of water bowsers • Cordon off construction area • Contractor will ensure provision of appropriate housing, water supply, and sanitation facilities to construction labor. • PPEs (See Annex-VI) will be provided to workers • Availability of safe drinking water and food for the workers. 	

Environment & Social Management Plan (ESMP)

<p>Construction material storage, handling and use</p>	<p>Environmental Issues:</p> <ul style="list-style-type: none"> • Water may also be contaminated due to the any oil spillages from machinery. • Health risk to workers and local inhabitants. <p>Social Issues:</p> <ul style="list-style-type: none"> • Land acquisition for storage of construction material • Accidents/ Injuries expected if neglected • Blockage of passage for pedestrians • Haphazard arrangement of construction material 			<ul style="list-style-type: none"> • Material will be appropriately secured to ensure safe passage between the destinations during transportation • Loads/heaps will have appropriate cover to prevent spillage and contractor should be responsible for any clean up resulting from any failure. • Materials will not be loaded to a higher level than the side and tail boards and shall be covered with a good quality tarpaulin; • If land acquired for storage of machinery & materials on temporarily basis: Contractor is liable to compensate the land owner according to agreement/ negotiations/ voluntarily • Contractor will lay/ utilize construction materials as per work requirement from his store. • Contractor will use night vision reflective signboards/ reflective tapes to cordon off the area during construction/ excavation activities. 	
<p>Labor Camp (if established by Contractor)</p>	<p>Health impacts due to absence of housing and sanitation facilities in labor camp.</p>			<ul style="list-style-type: none"> • Contractor will ensure provision of appropriate housing, water supply, and sanitation facilities to construction labor. • Good housekeeping will be ensured inside campsite • Labor will be provided with quality food. • Better heating & cooling facilities will be provided by the Contractor as per season accordingly. • Better accommodation will be ensured by the Contractor. • It's better to accommodate labor in Containers Camps/houses with all amenities. 	
<p>Vehicle Movements</p>	<ul style="list-style-type: none"> • Traffic congestion • Conflicts 			<ul style="list-style-type: none"> • Alternative routes will be provided. • Sign boards and posters will also be displayed at project site and adjacent areas as well. Inform the residents about timing, schedule and construction work duration. • Work will be done in portions so that the alternate road may be used safely and vehicles movement will not be disturbed. 	

Environment & Social Management Plan (ESMP)

				<ul style="list-style-type: none"> Contractor will submit Traffic Management Plan and approve from ESFPs before the execution of work. 	
Public access	Problems for pedestrians. Normal mode of transport may be disturbed during Sub-project execution.			<ul style="list-style-type: none"> Alternate access route will be made sure. Construction will be done inside the MC facility premises. Cordon off excavated area. 	
Drinking water contamination	<ul style="list-style-type: none"> Health issues. Public Conflicts with labor. 			<ul style="list-style-type: none"> Control of waste water with Sucker machines to avoid drinking water contamination and accumulation of stagnant water. Call plumbers for immediate repair. Contact Nos. of MC help line will be displayed at project site and public may contact on these Nos. in case of any emergency. Minor leakage control with tapes. Disposal of waste water along with construction waste in environment friendly way. 	
Occupational Health & Safety	<ul style="list-style-type: none"> Injuries to workers/LTI 			<ul style="list-style-type: none"> Contractor will follow HSE SOPs for all activities on the site. Workers will be trained and guided to follow SOPs and will be provided with necessary PPEs (Safety Helmets, Safety Shoes, Gloves, Chemical Masks etc.) wherever required. First aid will be provided immediately to save the life of affected persons. Careful monitoring will also be carried out. 	
Damage to Public Infrastructure/utilities	<ul style="list-style-type: none"> Accidents/Incidents/Injuries Structural loss Social Conflicts 			<ul style="list-style-type: none"> Contractor will ensure no damage to public utilities or structures. Contractor will provide compensation for the damages to entitle accordingly. 	
Sexual Harassment & Labor Influx	<ul style="list-style-type: none"> Social Conflicts 			<ul style="list-style-type: none"> Contractor will give behavioral training to the workforce. Contractor will hire local labor for un-skilled works. 	

Environment & Social Management Plan (ESMP)

CoViD-19 SOPs implementation	<ul style="list-style-type: none"> Spread of Corona among the labor 			<ul style="list-style-type: none"> Contractor will provide face masks to the labor on daily basis to reduce Corona impact. Contractor will follow CoViD-19 guidelines during construction works (Annex-III) 	
De-Commissioning Phase					
Restoration of Road	<ul style="list-style-type: none"> Accidents/Injuries due to haphazard refilling of trenches. 			<ul style="list-style-type: none"> Contractor will do compaction of refilled material into trenches after replacing sewer-lines. 	
Operational Phase					
Seepage/Spill water	<p>Environmental issues:</p> <ul style="list-style-type: none"> Increase moisture content in soil which affects the structures/foundation of buildings in nearby areas. Contaminate the water <p>Social issues: No significant impacts will arise</p>			<ul style="list-style-type: none"> Ensure proper technical design to minimize, the seepage and chances of possible failure of the structure. Ensure proper design, construction and operation of the structure and system to minimize seepage and appropriate implementation techniques. In case of failure of nearby building structures, foundation, monetary compensation shall be provided. 	

Annexure VII: Chance Find Procedures

Chance find procedures which will be used during this Project are as follows:

- Stop the construction activities in the area of the chance find;
- Delineate the discovered site or area;
- Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, a night guard shall be present until the responsible local authorities and the Ministry in charge of Department of Archaeology take over;
- Notify the supervisory Engineer who in turn will notify the responsible local authorities and the Ministry immediately (within 24 hours or less);
- Responsible local authorities and the Ministry in charge of Department of Archaeology would oversee protecting and preserving the site before deciding on subsequent appropriate procedures. This would require a preliminary evaluation of the findings to be performed by the archaeologists of the Department of Archaeology and Museums (within 72 hours). The significance and importance of the findings should be assessed according to the various criteria relevant to cultural heritage; those include the aesthetic, historic, scientific or research, social and economic values;
- Decisions on how to handle the finding shall be taken by the responsible authorities and the Ministry in charge of Department of Archaeology. This could include changes in the layout (such as when finding an irremovable remain of cultural or archaeological importance) conservation, preservation, restoration and salvage;
- Implementation for the authority decision concerning the management of the finding shall be communicated in writing by the Ministry in charge of Department of Archaeology; and
- Construction work could resume only after permission is given from the responsible local authorities and the Ministry in charge of Department of Archaeology concerning safeguard of the heritage.

These procedures will be referred to as standard provisions in construction contracts, when applicable. During project supervision, the Site Engineer will monitor the above regulations relating to the treatment of any chance find encountered are observed.



ANALYTICAL REPORT

LHR-22-0731/10

CLIENT DETAILS		LABORATORY DETAILS	
Client	MM Pakistan (PVT)LTD.	SGS Reference	C&P-LHR-22-0731/10 (Boss Order No. 5016711)
Address	Khanewal	Sample Collected	13-10-2022
Contact	Mr. Arsam Ahmed Awan	Sample Received In Lab	14-10-2022: 17: 50
Telephone	+92 (0) 42 36300440	Analysis Completion Date	28-10-2022
Fax	-	Date Reported	28-10-2022
Email	arsam.ahmed@mmpakistan.com	Sampling Technique	Grab Samples
Project	(not specified)		
Order Number	(not specified)		
Samples	Water samples		
Sample Collected	Mr. Muzammil		

COMMENTS

This report is not valid for any negotiation.
 The lab is accredited in accordance with ISO 17025:2017 with accreditation number LAB 067.
 Uncertainty of results will be provided upon request.
 The results are reported as absolute value +/- the absolute uncertainty of measurement estimated by the laboratory
 The remaining portion of the chemical sample (s) will be disposed off after one week unless otherwise instructed. (Conditions Apply)

SIGNATORIES

<p>Sample Analyzed By Mr. Mubashir</p>	<p>Laboratory In-Charge (QA/QC) Ms. Mahpara Alam</p>	<p>Chief Analyst / DH Mr. Ali Hashim 0321-6461538</p>
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SGS Pakistan (Private) Limited

Plot No. 07, Din Muhammad Town, 19-KM Off Multan Road, Lahore UAN: 111-222-747
 t +92 -42-37515415-18, f +92-42-37515420, www.sgs.com

Member of SGS Group (Société Générale de Surveillance)

Environment & Social Management Plan (ESMP)



ANALYTICAL REPORT

LHR-22-0731/10

Sample No.	C&P-LHR-22-0731/10-01				
Client ID	Tube well #12 (Peoples colony)				
Sampled By	SGS				
Parameter	Units	LOR	Results	Limit as per PEOS for Drinking Water	Remarks
Turbidity based on APHA 2130 B 23rd Edition					
Turbidity	NTU	1.0	03	<5 NTU	C
pH based on APHA 4500H⁺ B 23rd Edition					
*pH @ 25°C	pH unit	0.1	7.47	6.5–8.5	C
Color based on APHA 2120 B & C 23rd Edition (Lovibond Mth No. 203)					
Color	Pt-Co	5.0	<5.0	≤15 TCU	C
Total Dissolved Solid based on APHA 2540 C 23rd Edition					
*Solids, Total Dissolved (TDS)	mg/L	5.0	928	<1000	C
Total Hardness based on APHA 2340 C 23rd Edition					
*Hardness, Total as CaCO ₃	mg/L	1.0	348	<500	C
Alkalinity, Total as CaCO₃ based on APHA-2320 B 23rd Edition					
*Alkalinity, Total as CaCO ₃	mg/L	1.0	256	-	-
Nitrate, Nitrogen (NO₃) based on APHA 4500-NO₃-B 23rd Edition					
(NO ₃ -N)	mg/L	1.0	<1.0	≤50	C
Carbonates, based on APHA-2320 B 23rd Edition					
Carbonates (CO ₃)	mg/L	1.0	<1.0	-	-
Hardness, Bicarbonate based on APHA 2340 C 23rd Edition					
*Hardness, Bicarbonate	mg/L	1.0	92	-	-
Sulfate based on APHA 4500 SO₄²⁻ C 23rd Edition					
*Sulfate (SO ₄ ²⁻)	mg/L	5.0	266.71	-	-
Chloride, based on APHA-4500Cl- B 23rd Edition					
*Chloride	mg/L	0.5	94.60	<250	C
Conductivity, Electrical based on APHA 2510 B 23rd Edition					
*Conductivity, Electrical	µS/cm	2.0	1517	-	-
Fluoride based on APHA 4500 F⁻ B,D 23rd Edition					
Fluoride F ⁻	mg/L	1.0	<1.0	≤1.5	C
Metals by AAS/ICP-OES based on APHA 3111B/3120 B 23rd Edition					
*Arsenic (As)	mg/L	0.005	0.007	≤0.05	C
*Iron (Fe)	mg/L	0.005	0.068	-	-
*Sodium (Na)	mg/L	1.0	102.00	-	-
*Potassium (K)	mg/L	0.2	9.78	-	-
*Calcium (Ca)	mg/L	0.02	21.70	-	-
*Magnesium (Mg)	mg/L	0.02	14.20	-	-
Total coliform Membrane Filtration Technique APHA 9222 B 23rd Edition					
*Total coliform	CFU/100ml	-	Absent	0 CFU / 100ml	C
Faecal coliform (E. coli) Membrane Filtration Technique APHA 9222 D 23rd Edition					
* Faecal coliform (E. coli)	CFU/100ml	-	Absent	0 CFU / 100ml	C

Environment & Social Management Plan (ESMP)



ANALYTICAL REPORT

LHR-22-0731/10

Sample No.	C&P-LHR-22-0731/10-02				
Client ID	OHR Peoples colony (Ground Water Sample)				
Sampled By	SGS				
Parameter	Units	LOR	Results	Limit as per PEQS for Drinking Water	Remarks
Turbidity based on APHA 2130 B 23rd Edition					
Turbidity	NTU	1.0	04	<5 NTU	C
pH based on APHA 4500H¹ B 23rd Edition					
*pH @ 25°C	pH unit	0.1	7.76	6.5–8.5	C
Color based on APHA 2120 B & C 23rd Edition (Lovibond Mh No. 203)					
Color	Pt-Co	5.0	<5.0	≤15 TCU	C
Total Dissolved Solid based on APHA 2540 C 23rd Edition					
*Solids, Total Dissolved (TDS)	mg/L	5.0	878	<1000	C
Total Hardness based on APHA 2340 C 23rd Edition					
*Hardness, Total as CaCO ₃	mg/L	1.0	356	<500	C
Alkalinity, Total as CaCO₃ based on APHA-2320 B 23rd Edition					
*Alkalinity, Total as CaCO ₃	mg/L	1.0	252	-	-
Nitrate, Nitrogen (NO₃) based on APHA 4500-NO₃-B 23rd Edition					
(NO ₃ -N)	mg/L	1.0	<1.0	≤50	C
Carbonates, based on APHA-2320 B 23rd Edition					
Carbonates (CO ₃)	mg/L	1.0	<1.0	-	-
Hardness, Bicarbonate based on APHA 2340 C 23rd Edition					
*Hardness, Bicarbonate	mg/L	1.0	104	-	-
Sulfate based on APHA 4500 SO₄²⁻ C 23rd Edition					
*Sulfate (SO ₄ ²⁻)	mg/L	5.0	391.84	-	-
Chloride, based on APHA-4500Cl- B 23rd Edition					
*Chloride	mg/L	0.5	110.37	<250	C
Conductivity, Electrical based on APHA 2510 B 23rd Edition					
*Conductivity, Electrical	µS/cm	2.0	1516	-	-
Fluoride based on APHA 4500 F⁻ B,D 23rd Edition					
Fluoride F ⁻	mg/L	1.0	<1.0	≤1.5	C
Metals by AAS/ICP-OES based on APHA 311B/3120 B 23rd Edition					
^A Arsenic (As)	mg/L	0.005	0.020	≤0.05	C
^A Iron (Fe)	mg/L	0.005	0.020	-	-
^A Sodium (Na)	mg/L	1.0	179.00	-	-
^A Potassium (K)	mg/L	0.2	7.43	-	-
^A Calcium (Ca)	mg/L	0.02	36.60	-	-
^A Magnesium (Mg)	mg/L	0.02	17.49	-	-
Total coliform Membrane Filtration Technique APHA 9222 B 23rd Edition					
*Total coliform	CFU/100ml	-	58	0 CFU / 100ml	NC
Faecal coliform (E. coli) Membrane Filtration Technique APHA 9222 D 23rd Edition					
* Faecal coliform (E. coli)	CFU/100ml	-	Absent	0 CFU / 100ml	C

Environment & Social Management Plan (ESMP)



ANALYTICAL REPORT

LHR-22-0731/10

Sample No.	C&P-LHR-22-0731/10-03				
Client ID	3-Maria scheme W-block (Drinking Water Sample)				
Sampled By	SGS				
Parameter	Units	LOR	Results	Limit as per PEQS for Drinking Water	Remarks
Turbidity based on APHA 2130 B 23rd Edition					
Turbidity	NTU	1.0	3	<5 NTU	C
pH based on APHA 4500H⁺ B 23rd Edition					
*pH @ 25°C	pH unit	0.1	7.68	6.5–8.5	C
Color based on APHA 2120 B & C 23rd Edition (Lovibond Mth No. 203)					
Color	Pt-Co	5.0	<5.0	≤15 TCU	C
Total Dissolved Solid based on APHA 2540 C 23rd Edition					
*Solids, Total Dissolved (TDS)	mg/L	5.0	934	<1000	C
Total Hardness based on APHA 2340 C 23rd Edition					
*Hardness, Total as CaCO ₃	mg/L	1.0	324	<500	C
Alkalinity, Total as CaCO₃ based on APHA-2320 B 23rd Edition					
*Alkalinity, Total as CaCO ₃	mg/L	1.0	216	-	-
Nitrate, Nitrogen (NO₃⁻) based on APHA 4500-NO₃-B 23rd Edition					
(NO ₃ -N)	mg/L	1.0	<1.0	≤50	C
Carbonates, based on APHA-2320 B 23rd Edition					
Carbonates (CO ₃ ⁻)	mg/L	1.0	<1.0	-	-
Hardness, Bicarbonate based on APHA 2340 C 23rd Edition					
*Hardness, Bicarbonate	mg/L	1.0	108	-	-
Sulfate based on APHA 4500 SO₄²⁻ C 23rd Edition					
*Sulfate (SO ₄ ²⁻)	mg/L	5.0	413.24	-	-
Chloride, based on APHA-4500Cl- B 23rd Edition					
*Chloride	mg/L	0.5	112.34	<250	C
Conductivity, Electrical based on APHA 2510 B 23rd Edition					
*Conductivity, Electrical	µS/cm	2.0	1589	-	-
Fluoride based on APHA 4500 F B,D 23rd Edition					
Fluoride F ⁻	mg/L	1.0	<1.0	≤1.5	C
Metals by AAS/ICP-OES based on APHA 3111B/3120 B 23rd Edition					
*Arsenic (As)	mg/L	0.005	0.032	≤0.05	C
*Iron (Fe)	mg/L	0.005	0.047	-	-
*Sodium (Na)	mg/L	1.0	106.00	-	-
*Potassium (K)	mg/L	0.2	5.88	-	-
*Calcium (Ca)	mg/L	0.02	31.50	-	-
*Magnesium (Mg)	mg/L	0.02	16.74	-	-
Total coliform Membrane Filtration Technique APHA 9222 B 23rd Edition					
*Total coliform	CFU/100ml	-	Absent	0 CFU / 100ml	C
Faecal coliform (E. coli) Membrane Filtration Technique APHA 9222 D 23rd Edition					
* Faecal coliform (E. coli)	CFU/100ml	-	Absent	0 CFU / 100ml	C

Environment & Social Management Plan (ESMP)



ANALYTICAL REPORT

LHR-22-0731/10

Sample No.	C&P-LHR-22-0731/10-04				
Client ID	Tube Well # 1 T-chowk (Ground Water Sample)				
Sampled By	SGS				
Parameter	Units	LOR	Results	Limit as per PEQS for Drinking Water	Remarks
Turbidity based on APHA 2130 B 23rd Edition					
Turbidity	NTU	1.0	9	<5 NTU	NC
pH based on APHA 4500H¹ B 23rd Edition					
*pH @ 25°C	pH unit	0.1	7.59	6.5–8.5	C
Color based on APHA 2120 B & C 23rd Edition (Lovibond Mh No. 203)					
Color	Pt-Co	5.0	<5.0	≤15 TCU	C
Total Dissolved Solid based on APHA 2540 C 23rd Edition					
*Solids, Total Dissolved (TDS)	mg/L	5.0	1284	<1000	NC
Total Hardness based on APHA 2340 C 23rd Edition					
*Hardness, Total as CaCO ₃	mg/L	1.0	392	<500	C
Alkalinity, Total as CaCO₃ based on APHA-2320 B 23rd Edition					
*Alkalinity, Total as CaCO ₃	mg/L	1.0	340	-	-
Nitrate, Nitrogen (NO₃) based on APHA 4500-NO₃-B 23rd Edition					
(NO ₃ -N)	mg/L	1.0	<1.0	≤50	C
Carbonates, based on APHA-2320 B 23rd Edition					
Carbonates (CO ₃)	mg/L	1.0	<1.0	-	-
Hardness, Bicarbonate based on APHA 2340 C 23rd Edition					
*Hardness, Bicarbonate	mg/L	1.0	52	-	-
Sulfate based on APHA 4500 SO₄²⁻ C 23rd Edition					
*Sulfate (SO ₄ ²⁻)	mg/L	5.0	549.07	-	-
Chloride, based on APHA-4500Cl- B 23rd Edition					
*Chloride	mg/L	0.5	136.00	<250	C
Conductivity, Electrical based on APHA 2510 B 23rd Edition					
*Conductivity, Electrical	µS/cm	2.0	2057	-	-
Fluoride based on APHA 4500 F⁻ B,D 23rd Edition					
Fluoride F ⁻	mg/L	1.0	<1.0	≤1.5	C
Metals by AAS/ICP-OES based on APHA 311B/3120 B 23rd Edition					
*Arsenic (As)	mg/L	0.005	0.048	≤0.05	C
*Iron (Fe)	mg/L	0.005	0.011	-	-
*Sodium (Na)	mg/L	1.0	279.00	-	-
*Potassium (K)	mg/L	0.2	14.10	-	-
*Calcium (Ca)	mg/L	0.02	67.40	-	-
*Magnesium (Mg)	mg/L	0.02	35.86	-	-
Total coliform Membrane Filtration Technique APHA 9222 B 23rd Edition					
*Total coliform	CFU/100ml	-	84	0 CFU / 100ml	NC
Faecal coliform (E. coli) Membrane Filtration Technique APHA 9222 D 23rd Edition					
* Faecal coliform (E. coli)	CFU/100ml	-	Absent	0 CFU / 100ml	C



Sample No.	C&P-LHR-22-0731/10-05				
Client ID	OHR T-chowk				
Sampled By	(Ground Water Sample)				
Parameter	Units	LOR	Results	Limit as per PEQS for Drinking Water	Remarks
Turbidity based on APHA 2130 B 23rd Edition					
Turbidity	NTU	1.0	8	<5 NTU	NC
pH based on APHA 4500H¹ B 23rd Edition					
*pH @ 25°C	pH unit	0.1	7.70	6.5–8.5	C
Color based on APHA 2120 B & C 23rd Edition (Lovibond Mth No. 203)					
Color	Pt-Co	5.0	<5.0	≤15 TCU	C
Total Dissolved Solid based on APHA 2540 C 23rd Edition					
*Solids, Total Dissolved (TDS)	mg/L	5.0	1250	<1000	NC
Total Hardness based on APHA 2340 C 23rd Edition					
*Hardness, Total as CaCO ₃	mg/L	1.0	388	<500	C
Alkalinity, Total as CaCO₃ based on APHA-2320 B 23rd Edition					
*Alkalinity, Total as CaCO ₃	mg/L	1.0	336	-	-
Nitrate, Nitrogen (NO₃-N) based on APHA 4500-NO₃-B 23rd Edition					
(NO ₃ -N)	mg/L	1.0	<1.0	≤50	C
Carbonates, based on APHA-2320 B 23rd Edition					
Carbonates (CO ₃)	mg/L	1.0	<1.0	-	-
Hardness, Bicarbonate based on APHA 2340 C 23rd Edition					
*Hardness, Bicarbonate	mg/L	1.0	52	-	-
Sulfate based on APHA 4500 SO₄²⁻ C 23rd Edition					
*Sulfate (SO ₄ ²⁻)	mg/L	5.0	529.72	-	-
Chloride, based on APHA-4500Cl- B 23rd Edition					
*Chloride	mg/L	0.5	130.08	<250	C
Conductivity, Electrical based on APHA 2510 B 23rd Edition					
*Conductivity, Electrical	µS/cm	2.0	2065	-	-
Fluoride based on APHA 4500 F⁻ B,D 23rd Edition					
Fluoride F ⁻	mg/L	1.0	<1.0	≤1.5	C
Metals by AAS/ICP-OES based on APHA 3111B/3120 B 23rd Edition					
*Arsenic (As)	mg/L	0.005	0.018	≤0.05	C
*Iron (Fe)	mg/L	0.005	0.024	-	-
*Sodium (Na)	mg/L	1.0	256.00	-	-
*Potassium (K)	mg/L	0.2	13.30	-	-
*Calcium (Ca)	mg/L	0.02	69.40	-	-
*Magnesium (Mg)	mg/L	0.02	36.30	-	-
Total coliform Membrane Filtration Technique APHA 9222 B 23rd Edition					
*Total coliform	CFU/100ml	-	Absent	0 CFU / 100ml	C
Faecal coliform (E. coli) Membrane Filtration Technique APHA 9222 D 23rd Edition					
* Faecal coliform (E. coli)	CFU/100ml	-	Absent	0 CFU / 100ml	C

Environment & Social Management Plan (ESMP)



ANALYTICAL REPORT

LHR-22-0731/10

Sample No.	C&P-LHR-22-0731/10-06				
Client ID	Islam Park Near Public school (Drinking Water Sample)				
Sampled By	SGS				
Parameter	Units	LOR	Results	Limit as per PEQS for Drinking Water	Remarks
Turbidity based on APHA 2130 B 23rd Edition					
Turbidity	NTU	1.0	2	<5 NTU	C
pH based on APHA 4500H⁺ B 23rd Edition					
*pH @ 25°C	pH unit	0.1	7.63	6.5–8.5	C
Color based on APHA 2120 B & C 23rd Edition (Lovibond Mth No. 203)					
Color	Pt-Co	5.0	<5.0	≤15 TCU	C
Total Dissolved Solid based on APHA 2540 C 23rd Edition					
*Solids, Total Dissolved (TDS)	mg/L	5.0	1252	<1000	NC
Total Hardness based on APHA 2340 C 23rd Edition					
*Hardness, Total as CaCO ₃	mg/L	1.0	396	<500	C
Alkalinity, Total as CaCO₃ based on APHA-2320 B 23rd Edition					
*Alkalinity, Total as CaCO ₃	mg/L	1.0	336	-	-
Nitrate, Nitrogen (NO₃-N) based on APHA 4500-NO₃-B 23rd Edition					
(NO ₃ -N)	mg/L	1.0	<1.0	≤50	C
Carbonates, based on APHA-2320 B 23rd Edition					
Carbonates (CO ₃)	mg/L	1.0	<1.0	-	-
Hardness, Bicarbonate based on APHA 2340 C 23rd Edition					
*Hardness, Bicarbonate	mg/L	1.0	60	-	-
Sulfate based on APHA 4500 SO₄²⁻ C 23rd Edition					
*Sulfate (SO ₄ ²⁻)	mg/L	5.0	540.84	-	-
Chloride, based on APHA-4500Cl- B 23rd Edition					
*Chloride	mg/L	0.5	139.94	<250	C
Conductivity, Electrical based on APHA 2510 B 23rd Edition					
*Conductivity, Electrical	µS/cm	2.0	2069	-	-
Fluoride based on APHA 4500 F B,D 23rd Edition					
Fluoride F ⁻	mg/L	1.0	<1.0	≤1.5	C
Metals by AAS/ICP-OES based on APHA 3111B/3120 B 23rd Edition					
*Arsenic (As)	mg/L	0.005	0.021	≤0.05	C
*Iron (Fe)	mg/L	0.005	0.10	-	-
*Sodium (Na)	mg/L	1.0	178.00	-	-
*Potassium (K)	mg/L	0.2	14.38	-	-
*Calcium (Ca)	mg/L	0.02	64.60	-	-
*Magnesium (Mg)	mg/L	0.02	31.45	-	-
Total coliform Membrane Filtration Technique APHA 9222 B 23rd Edition					
*Total coliform	CFU/100ml	-	39	0 CFU / 100ml	NC
Faecal coliform (E. coli) Membrane Filtration Technique APHA 9222 D 23rd Edition					
* Faecal coliform (E. coli)	CFU/100ml	-	Absent	0 CFU / 100ml	C

Environment & Social Management Plan (ESMP)



ANALYTICAL REPORT

LHR-22-0731/10

Sample No.	C&P-LHR-22-0731/10-07				
Client ID	Tube Well # 17 (Ground Water Sample)				
Sampled By	SGS				
Parameter	Units	LOR	Results	Limit as per PEQS for Drinking Water	Remarks
Turbidity based on APHA 2130 B 23rd Edition					
Turbidity	NTU	1.0	4	<5 NTU	C
pH based on APHA 4500H¹ B 23rd Edition					
*pH @ 25°C	pH unit	0.1	7.82	6.5–8.5	C
Color based on APHA 2120 B & C 23rd Edition (Lovibond Mh No. 203)					
Color	Pt-Co	5.0	<5.0	≤15 TCU	C
Total Dissolved Solid based on APHA 2540 C 23rd Edition					
*Solids, Total Dissolved (TDS)	mg/L	5.0	673	<1000	C
Total Hardness based on APHA 2340 C 23rd Edition					
*Hardness, Total as CaCO ₃	mg/L	1.0	192	<500	C
Alkalinity, Total as CaCO₃ based on APHA-2320 B 23rd Edition					
*Alkalinity, Total as CaCO ₃	mg/L	1.0	180	-	-
Nitrate, Nitrogen (NO₃) based on APHA 4500-NO₃-B 23rd Edition					
(NO ₃ -N)	mg/L	1.0	<1.0	≤50	C
Carbonates, based on APHA-2320 B 23rd Edition					
Carbonates (CO ₃)	mg/L	1.0	<1.0	-	-
Hardness, Bicarbonate based on APHA 2340 C 23rd Edition					
*Hardness, Bicarbonate	mg/L	1.0	12	-	-
Sulfate based on APHA 4500 SO₄²⁻ C 23rd Edition					
*Sulfate (SO ₄ ²⁻)	mg/L	5.0	249.84	-	-
Chloride, based on APHA-4500Cl- B 23rd Edition					
*Chloride	mg/L	0.5	57.15	<250	C
Conductivity, Electrical based on APHA 2510 B 23rd Edition					
*Conductivity, Electrical	µS/cm	2.0	1005	-	-
Fluoride based on APHA 4500 F⁻ B,D 23rd Edition					
Fluoride F ⁻	mg/L	1.0	<1.0	≤1.5	C
Metals by AAS/ICP-OES based on APHA 311B/3120 B 23rd Edition					
*Arsenic (As)	mg/L	0.005	<0.005	≤0.05	C
*Iron (Fe)	mg/L	0.005	0.025	-	-
*Sodium (Na)	mg/L	1.0	141.00	-	-
*Potassium (K)	mg/L	0.2	16.70	-	-
*Calcium (Ca)	mg/L	0.02	67.50	-	-
*Magnesium (Mg)	mg/L	0.02	31.59	-	-
Total coliform Membrane Filtration Technique APHA 9222 B 23rd Edition					
*Total coliform	CFU/100ml	-	Absent	0 CFU / 100ml	C
Faecal coliform (E. coli) Membrane Filtration Technique APHA 9222 D 23rd Edition					
* Faecal coliform (E. coli)	CFU/100ml	-	Absent	0 CFU / 100ml	C

Environment & Social Management Plan (ESMP)



ANALYTICAL REPORT

LHR-22-0731/10

Sample No.	C&P-LHR-22-0731/10-08				
Client ID	Tube well # 14 Colony # 1 (Ground Water Sample)				
Sampled By	SGS				
Parameter	Units	LOR	Results	Limit as per PEOS for Drinking Water	Remarks
Turbidity based on APHA 2130 B 23rd Edition					
Turbidity	NTU	1.0	2	<5 NTU	C
pH based on APHA 4500H⁺ B 23rd Edition					
*pH @ 25°C	pH unit	0.1	7.89	6.5–8.5	C
Color based on APHA 2120 B & C 23rd Edition (Lovibond Mth No. 203)					
Color	Pt-Co	5.0	<5.0	≤15 TCU	C
Total Dissolved Solid based on APHA 2540 C 23rd Edition					
*Solids, Total Dissolved (TDS)	mg/L	5.0	761	<1000	C
Total Hardness based on APHA 2340 C 23rd Edition					
*Hardness, Total as CaCO ₃	mg/L	1.0	200	<500	C
Alkalinity, Total as CaCO₃ based on APHA-2320 B 23rd Edition					
*Alkalinity, Total as CaCO ₃	mg/L	1.0	224	-	-
Nitrate, Nitrogen (NO₃) based on APHA 4500-NO₃-B 23rd Edition					
(NO ₃ -N)	mg/L	1.0	<1.0	≤50	C
Carbonates, based on APHA-2320 B 23rd Edition					
Carbonates (CO ₃)	mg/L	1.0	<1.0	-	-
Hardness, Bicarbonate based on APHA 2340 C 23rd Edition					
*Hardness, Bicarbonate	mg/L	1.0	<1.0	-	-
Sulfate based on APHA 4500 SO₄²⁻ C 23rd Edition					
*Sulfate (SO ₄ ²⁻)	mg/L	5.0	288.53	-	-
Chloride, based on APHA-4500Cl- B 23rd Edition					
*Chloride	mg/L	0.5	53.21	<250	C
Conductivity, Electrical based on APHA 2510 B 23rd Edition					
*Conductivity, Electrical	µS/cm	2.0	1171	-	-
Fluoride based on APHA 4500 F⁻ B,D 23rd Edition					
Fluoride F ⁻	mg/L	1.0	<1.0	≤1.5	C
Metals by AAS/ICP-OES based on APHA 3111B/3120 B 23rd Edition					
*Arsenic (As)	mg/L	0.005	0.035	≤0.05	C
*Iron (Fe)	mg/L	0.005	0.023	-	-
*Sodium (Na)	mg/L	1.0	181.00	-	-
*Potassium (K)	mg/L	0.2	11.01	-	-
*Calcium (Ca)	mg/L	0.02	57.20	-	-
*Magnesium (Mg)	mg/L	0.02	24.42	-	-
Total coliform Membrane Filtration Technique APHA 9222 B 23rd Edition					
*Total coliform	CFU/100ml	-	73	0 CFU / 100ml	NC
Faecal coliform (E. coli) Membrane Filtration Technique APHA 9222 D 23rd Edition					
* Faecal coliform (E. coli)	CFU/100ml	-	41	0 CFU / 100ml	NC

Environment & Social Management Plan (ESMP)



ANALYTICAL REPORT

LHR-22-0731/10

Sample No.	C&P-LHR-22-0731/10-12					Remarks
Client ID	Tube well # 20 (Ground Water Sample)					
Sampled By	SGS					
Parameter	Units	LOR	Results	Limit as per PEQS for Drinking Water		
Turbidity based on APHA 2130 B 23rd Edition						
Turbidity	NTU	1.0	4	<5 NTU		C
pH based on APHA 4500H¹ B 23rd Edition						
*pH @ 25°C	pH unit	0.1	7.95	6.5–8.5		C
Color based on APHA 2120 B & C 23rd Edition (Lovibond Mh No. 203)						
Color	Pt-Co	5.0	<5.0	≤15 TCU		C
Total Dissolved Solid based on APHA 2540 C 23rd Edition						
*Solids, Total Dissolved (TDS)	mg/L	5.0	714	<1000		C
Total Hardness based on APHA 2340 C 23rd Edition						
*Hardness, Total as CaCO ₃	mg/L	1.0	214	<500		C
Alkalinity, Total as CaCO₃ based on APHA-2320 B 23rd Edition						
*Alkalinity, Total as CaCO ₃	mg/L	1.0	210	-		-
Nitrate, Nitrogen (NO₃) based on APHA 4500-NO₃-B 23rd Edition						
(NO ₃ -N)	mg/L	1.0	<1.0	≤50		C
Carbonates, based on APHA-2320 B 23rd Edition						
Carbonates (CO ₃)	mg/L	1.0	<1.0	-		-
Hardness, Bicarbonate based on APHA 2340 C 23rd Edition						
*Hardness, Bicarbonate	mg/L	1.0	4	-		-
Sulfate based on APHA 4500 SO₄²⁻ C 23rd Edition						
*Sulfate (SO ₄ ²⁻)	mg/L	5.0	159.698	-		-
Chloride, based on APHA-4500Cl- B 23rd Edition						
*Chloride	mg/L	0.5	46.31	<250		C
Conductivity, Electrical based on APHA 2510 B 23rd Edition						
*Conductivity, Electrical	µS/cm	2.0	1022	-		-
Fluoride based on APHA 4500 F⁻ B,D 23rd Edition						
Fluoride F ⁻	mg/L	1.0	<1.0	≤1.5		C
Metals by AAS/ICP-OES based on APHA 311B/3120 B 23rd Edition						
*Arsenic (As)	mg/L	0.005	0.039	≤0.05		C
*Iron (Fe)	mg/L	0.005	0.046	-		-
*Sodium (Na)	mg/L	1.0	260.00	-		-
*Potassium (K)	mg/L	0.2	13.60	-		-
*Calcium (Ca)	mg/L	0.02	69.90	-		-
*Magnesium (Mg)	mg/L	0.02	36.21	-		-
Total coliform Membrane Filtration Technique APHA 9222 B 23rd Edition						
*Total coliform	CFU/100ml	-	Absent	0 CFU / 100ml		C
Faecal coliform (E. coli) Membrane Filtration Technique APHA 9222 D 23rd Edition						
* Faecal coliform (E. coli)	CFU/100ml	-	Absent	0 CFU / 100ml		C



FOOTNOTE

IS	Insufficient sample for analysis.
LOR	Limits of Reporting
TCC	Total Colony Count
P/A	Present / Absent
MPN	Most Probable Number
TPC	Total Plate Count
HPC	Heterotrophic Plate count
APC	Aerobic Plate Count
TVA	Total Viable Count & Total Bacteria
FDA	Food & Drug Administration of USA
BAM	Bacteriological Analytical Manual
LNR	Sample Listed, but not received
*	This analysis is covered by the scope of accreditation.
**	Effluent Temperature should not increase $\leq 3^{\circ}\text{C}$ from receiving body Temperature
***	Residual Chlorine at consumer end.
^	Performed at SGS Karachi Lab.
#	Result will follow soon.
DH	Department Head
Environmental Condition	Temperature $25 \pm 5^{\circ}\text{C}$ Humidity $55 \pm 15\%$
C	Parameters are in Compliance with PEQS
NC	Parameters are not in Compliance with PEQS
PEQS	Punjab Environmental Quality Standard

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