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# KAYSERİ WATER AND SEWERAGE ADMINISTRATION (KASKİ) EASTERN REGION 1ST PHASE DRINKING WATER SUPPLY PROJECT

## ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

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## Project Information

### Project

#### Name

### Details

Kayseri Water and Sewerage Administration (KASKİ)  
Eastern Region 1st Phase Drinking Water Supply Project  
Environmental and Social Management Plan (ESMP)

#### Project Owner

Kayseri Water and Sewerage Administration (KASKİ)

#### Financial Intermediary

ILBANK INC.

#### Prepared by

MGS Project Consultancy Engineering Trade Co. Ltd. (MGS)

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This Environmental and Social Management Plan has been prepared by MGS Project Consultancy Engineering Trade Co. Ltd. (MGS) within the scope of KASKİ Eastern Region 1st Phase Drinking Water Supply Project financed by the World Bank (WB).





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## Table of Contents

<b>LIST OF TABLES .....</b>	<b>4</b>
<b>LIST OF FIGURES.....</b>	<b>4</b>
<b>LIST OF ABBREVIATIONS.....</b>	<b>5</b>
<b>EXECUTIVE SUMMARY .....</b>	<b>6</b>
<b>1 INTRODUCTION.....</b>	<b>9</b>
1.1 Objective of Environmental and Social Management Plan (ESMP) .....	9
<b>2 PROJECT DESCRIPTION AND ACTIVITIES .....</b>	<b>10</b>
<b>3 BASELINE DATA .....</b>	<b>16</b>
3.1 Physical Environment.....	18
Natural and Cultural Resources .....	18
Earthquake .....	18
Topographic Situation .....	18
Climate .....	19
Soil and Land Composition .....	20
3.2 Land Use and Land Requirements.....	20
3.3 Socio-economic Environment.....	30
<b>4 ENVIRONMENTAL AND SOCIAL ASSESSMENT.....</b>	<b>34</b>
4.1 Impacts on the Physical Environment .....	34
Land Use, Soil and Geology:.....	34
Air Pollution, Noise and Vibration:.....	35
Water Resources and Wastewater:.....	36
Waste Management .....	37
Protected Areas.....	38
Visual Impacts and Landscape .....	38
Climate Change.....	39
4.2 Impacts on the Social Environment.....	39
Working Conditions and Workforce Management.....	39
Labor Influx.....	40
Traffic and Road Safety.....	40
Management and Safety of Hazardous Materials .....	41
Land Acquisition .....	42
Cultural Heritage.....	42
4.3 Occupational Health and Safety .....	43
<b>5 RISK AND IMPACTS, MITIGATION, MONITORING .....</b>	<b>44</b>
<b>6 ENVIRONMENTAL AND SOCIAL MANAGEMENT AND RESPONSIBILITIES.....</b>	<b>64</b>



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<b>7</b>	<b>CAPACITY DEVELOPMENT AND TRAINING .....</b>	<b>69</b>
<b>8</b>	<b>IMPLEMENTATION SCHEDULE AND COST ESTIMATES.....</b>	<b>70</b>
<b>9</b>	<b>STAKEHOLDER ENGAGEMENT .....</b>	<b>72</b>
	<b>ANNEXES .....</b>	<b>75</b>
	<b>ANNEX-1. WATER SOURCES AND WATER DISTRIBUTION SYSTEM DIAGRAM .....</b>	<b>76</b>
	<b>ANNEX-2. KAYSERİ METROPOLİTAN MUNICIPALITY CONSENT LETTER .....</b>	<b>77</b>
	<b>ANNEX-3. BEŞTEPELER PUMP STATION DEEDS.....</b>	<b>78</b>
	<b>ANNEX-4. ALLOCATION REQUEST LETTER REGARDING ILDEM RESERVOIR.....</b>	<b>79</b>
	<b>ANNEX-5. TALAS RESERVOIR DEEDS.....</b>	<b>80</b>
	<b>ANNEX-6. EIA OPINION .....</b>	<b>82</b>
	<b>ANNEX-7. DSI INSTITUTIONAL OPINION .....</b>	<b>83</b>
	<b>ANNEX-8. TRANSPORTATION INC. INSTITUTIONAL OPINION.....</b>	<b>84</b>
	<b>ANNEX-9. CHANCE FINDS PROCEDURE .....</b>	<b>85</b>





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## LIST OF TABLES

Table 3-1 Earthquakes with Magnitude 4.0 and Greater in Kayseri and Surroundings .....	18
Table 3-2 Average Temperature and Precipitation Data .....	19
Table 3-3 Land Usage Classes of Kayseri Province .....	20
Table 5-1 Impacts, Mitigation Measures and Monitoring Matrix <b>Hata! Yer iřareti tanımlanmamıř.</b>	
Table 6-1 Institutional Roles and Responsibilities .....	65
Table 6-2 List Of KASKİ PIU .....	68
Table 8-1 Elements that Constitute Project Cost .....	70
Table 9-1 Summary of the Backgrounds Studies .....	73

## LIST OF FIGURES

Figure 2-1 Proposed Project Components .....	<b>Hata! Yer iřareti tanımlanmamıř.</b>
Figure 2-2 Site Pictures .....	14
Figure 3-1 Project Location .....	17
Figure 3-2 Kayseri Province Physical Map .....	19
Figure 3-3 Beřtepelers Pumping Station .....	21
Figure 3-4 Konaklar Reservoir .....	23
Figure 3-5 Ildem Reservoir .....	25
Figure 3-6 Talas Reservoir Location .....	27
Figure 3-7 Route of the Transmission Lines .....	28
Figure 4-1 The Area Where Horizontal Drilling Will Be Carried Out Under the Rail System .....	41
Figure 6-1 Summary of Flowchart of Roles and Responsibilities .....	67
Figure 8-1 The Proposed Implementation Schedule, as of June 2024 .....	71



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## LIST OF ABBREVIATIONS

<b>Φ</b>	Diameter
<b>Consultant</b>	MGS Proje Müřavirlik Mühendislik Ticaret Ltd. řti. (MGS)
<b>E&amp;S</b>	Environmental and Social
<b>EHS</b>	Environmental, Health, and Safety
<b>EIA</b>	Environmental Impact Assessment
<b>ESF</b>	Environmental and Social Framework
<b>ESMP</b>	Environmental and Social Management Plan
<b>ESMR</b>	Environmental and Social Monitoring Reports
<b>ESMS</b>	Environmental and Social Management System
<b>ESS</b>	Environmental and Social Standards
<b>EU</b>	European Union
<b>FRIT</b>	The Financial Assistance Instrument for Refugees in Turkey
<b>GBV</b>	Gender-Based Violence
<b>GM</b>	Grievance Mechanism
<b>IFC</b>	International Finance Corporation
<b>ILBANK</b>	İller Bankası A.ř.
<b>IUWM</b>	Integrated Urban Water Management
<b>KASKİ</b>	Kayseri Water and Sewerage Administration
<b>m<sup>3</sup></b>	Cubic meter
<b>MoEUCC</b>	Ministry of Environment, Urbanization and Climate Change
<b>MGS</b>	MGS Project Consultancy Engineering Trade Co. Ltd. (MGS)
<b>MSIP</b>	Municipal Services Improvement Project
<b>OG</b>	Official Gazette
<b>OHS</b>	Occupational Health and Safety
<b>OHSMP</b>	Occupational Health and Safety Management Plan
<b>PIU</b>	Project Implementation Unit
<b>PMU</b>	Project Management Unit
<b>SEP</b>	Stakeholder Engagement Plan
<b>The Bank</b>	World Bank
<b>The Project</b>	Eastern Region 1st Phase Drinking Water Supply Project
<b>TurkStat</b>	Turkish Statistical Institute
<b>WB</b>	World Bank
<b>WBG</b>	World Bank Group
<b>WHO</b>	World Health Organization





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## EXECUTIVE SUMMARY

In light of the prolonged political turmoil in Syria, Türkiye has emerged as the premier sanctuary for refugees, functioning as both a crucial passageway and a host nation for migrants and refugees from the region. This influx has exerted considerable strain on the existing urban infrastructure, including the systems for water supply, sewage, and waste management in the host communities. Consequently, there is an immediate need for interventions in municipal infrastructure to enhance the current facilities. The Municipal Services Improvement Project in Refugee Affected Areas (P169996) specifically addresses the need for prioritizing municipal services, with a focus on the construction and refurbishment of facilities for water supply, sewage, and waste management in five provinces (Adana, Kahramanmaraş, Kayseri, Konya, and Osmaniye) that have been impacted by the presence of Syrian refugees in Türkiye.

Established as a Metropolitan Municipality in 1989, Kayseri saw the formation of the General Directorate of Kayseri Water and Sewerage Administration (KASKİ) through a decree by the Council of Ministers on December 14, 1989, with the decision number 14886. Tasked with managing Kayseri Metropolitan Municipality's water and sewerage services, KASKİ is charged with constructing necessary facilities, taking over existing ones, and operating them. Although KASKİ's operations are confined to the vicinity of the Kayseri Metropolitan Municipality, it also undertakes the crucial task of safeguarding the water resources outside the municipality's borders that supply the city. Functioning under Kayseri Metropolitan Municipality, KASKİ operates with an autonomous budget.

The "Kayseri Centrum East Region 1. Stage Water Supply Project," financed through the MSIP Project with funds from an IBRD Loan and an EU FRIT Grant, is an initiative by KASKİ aimed at addressing the acute water shortage in Kayseri's eastern sectors. The diminishing groundwater levels, coupled with a lack of alternative water sources in the catchment areas servicing this region, underscore the project's necessity and urgency. A significant factor contributing to the soaring demand for water is the rapid development of the area in recent years, compounded by the surge in residential population due to the influx of Syrians under Temporary Protection (SuTP). As per the Directorate of Immigration Management's 2023 statistics<sup>1</sup>, Kayseri ranks as the 13th most favored city by SuTPs, hosting 81,317 registered individuals, which constitutes 5.34% of the total population of Kayseri. This preference is attributed to Kayseri's advanced economic opportunities compared to its neighboring cities. The Kayseri Social Situation Analysis Report by ORAN-Central Anatolia Development Agency reveals that a majority of the Syrian population, approximately 85%, resides in the central districts of Melikgazi and Kocasinan.

Whole projects aim transfer of the main water sources exist in the western part of the city to the project area in order to meet the demands of the eastern region.1. Stage of the project consists transmission of water supplied from Beřtepelers Reservoir (which is fed from wells in Dokuzpınarlar region) to Talas Reservoir through a planned pump station and construction of 2 planned reservoirs. The project includes the construction of 2 reservoirs, 1 pump station and 8.9 km of drinking water transmission line.

The water from 24 wells in the Dokuzpınarlar catchment area, with a total flow of 1350 l/s, is currently being conveyed to the 5000 m<sup>3</sup> capacity Beřtepelers Collection Reservoir through the existing transmission line. Within the scope of this project, the excess of 800 l/s of water conveyed to the Beřtepelers Drinking Water Collection Reservoir will be elevated with the planned pumping station and a Ø1000 mm steel pipeline to the Talas 15,000 m<sup>3</sup> Drinking Water Distribution Reservoir.

Due to the insufficient capacity of the depots to meet the water needs of the population in the eastern region, the first phase of the project will include the construction of a 5000 m<sup>3</sup> capacity

<sup>1</sup> Ministry of Interior, Department of Immigration, November 23, 2023



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Drinking Water Distribution Reservoir next to the Konaklar Drinking Water Reservoir and a 2500 m<sup>3</sup> capacity Drinking Water Distribution Reservoir next to the İldem Distribution Reservoir.

A total of 8890m transmission line will be constructed within the scope of the project. The summary of works to be carried out within the scope of the project are; Transmission Line between the existing collection depot and the planned pumping center in Bestepeler, Drain Lines and Lifting Line Between Bestepeler Planned Pumping Station And Talas Existing Distribution Depot, Construction Of An Additional 5000 M<sup>3</sup> Capacity Reservoir In Konaklar And An Additional 2500 M<sup>3</sup> Capacity Reservoir In İldem.

During construction and operation phases of the Project, environmental and social risks and impacts caused by project activities may arise. Any potential risks and impacts of the Project during the construction phase would be generally short term with low magnitude that would be locally significant. These impacts would mostly be related to traffic, noise, vibration, air quality, soil disturbance and contamination, waste management, community health and safety, and labor and working conditions (including occupational health and safety).

The ESMP has identified mitigation measures and monitoring activities to reduce and avoid impacts associated with the project. A summary of the mitigation measures is given below

Topic	Mitigation Measures
Soil Environment	Prevention of topsoil loss and soil contamination Erosion control measures
Water Resources	Stormwater and Sediment Control Water Quality and Supply System Protection
Waste Generation	Adequate waste disposal facilities Designation of temporary storage areas Principle of "reduction at the source"
Air Environment	Reduction of formation of particulate matter and dust Exhaust emissions management
Noise and Vibration	Regular maintenance of the construction machinery, equipment and vehicles Establishment of a grievance mechanism
Biodiversity and Natural Habitats	Procedures for unexpected threatened species finds Measures to further avoid and minimize the construction footprint
Cultural Heritage	Worker Cultural Heritage Sensitivity Training Chance Find Procedure
Traffic Circulation and Safety	Traffic Control and Scheduling Preparation of a Traffic Management Plan Safe driving by project personnel Usage of appropriate traffic signage Traffic safety and minimum traffic flow disruptions Prevention storage of construction materials, equipment and machineries on traffic lanes
Labor Force	A grievance mechanism Non-discrimination and equal opportunity Preparation of information materials Preparation of Labor Management Plan by Contractor Managing and monitoring the performance of contractors/sub-contractors in relation to the requirements of child labor, unregistered employment and forced labor Proper adaptation of human rights policy and labor rights Trainings to laborers, contractors/sub-contractors in relation to the requirements to prevent Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH)
Community and Occupational Health and Safety	Preparation of a Community and an Occupational Health and Safety Management Plans separately Providing a safe working environment for the workers Occupational Health and Safety trainings Ensuring usage of personal protective equipment Emergency Preparedness and Response Plan Necessary health and safety signs and traffic signs (fencing the construction areas and providing safe pass ways for the community members, etc.) First aid and emergency response equipment





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Topic	Mitigation Measures
	Adequate OHS organizational structure
Climate Change	Optimal utilization of the available construction equipment and materials Regular maintenance of construction vehicles and equipment Trainings for personnel regarding energy efficiency
Stakeholder Engagement	Establishment and Management of a grievance mechanism Disclosure of all project-related documents (ESMP, SEP, EPSA, etc.) prepared and other relevant information Preparation of communication materials Ensure regular consultations with the project stakeholders (including local authorities, communities, workers, etc.)





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# 1 INTRODUCTION

World Bank (WB) and the Ilbank Trade Incorporation (ILBANK) had agreed to sign the Municipal Services Improvement Project in Refugee Affected Areas (MSIP) on March 31, 2020, to provide finance to the municipalities/utilities which are affected by the influx of Syrians under Temporary Protection (SuTPs) and suffers from significant operational problems such as high water losses, inadequate water treatment facilities, ageing water supply and sanitation infrastructure, inadequate solid waste management, and lack of wastewater treatment. The fund for MSIP is provided from the grant financing by the European Development Fund (EDF) under the Municipal Infrastructure Window of the European Commission's Facility for Refugees in Türkiye (FRIT) and International Bank for Reconstruction and Development (IBRD) loan. ILBANK acts as the financial intermediary of MSIP.

MSIP is being implemented through three components:<sup>2</sup>

- Component-1: Environmental Infrastructure Investments
- Component-2: Technical Assistance for Project Management, Supervision, Capacity Building, Communication and Citizen Engagement
- Component-3: Monitoring and Evaluation of Trust Fund financed activities

The Directorate General of Kayseri Water and Sewerage Administration (KASKI) signed a sub-financing agreement with ILBANK for financing of East Region 1st Phase Drinking Water Supply Project (the Project) to be implemented under Component-1 of MSIP.

## 1.1 Objective of Environmental and Social Management Plan (ESMP)

MSIP is being implemented under the World Bank's (WB's) Environment and Social Framework (ESF). Per ESF, the Environmental and Social Management Framework (ESMF), Labor Management Procedures (LMP), Resettlement Framework (RF) and Stakeholder Engagement Plan (SEP) prepared for MSIP is disclosed at <https://www.ilbank.gov.tr/uidb/facility-for-refugees-in-turkey-frit-2> in February 2020.

The environmental and social (E&S) risk categorization of the Project was determined by the ILBANK Project Management Unit (PMU) and it is classified as Moderate. Thus, per ESMF of MSIP and the Environmental and Social Standard ESS1 on Assessment and Management of Environmental and Social Risks and Impacts, this Environmental and Social Management Plan (ESMP) is prepared for the Project. ESMP will also follow the national laws and regulations of Türkiye. The objective of the ESMP is to detail (i) the measures to be taken during the implementation and operation of the Project to eliminate or offset adverse E&S impacts, or to reduce them to acceptable levels; and (ii) the actions needed to implement these measures. More specifically the ESMP aims to: (a) assess the potential E&S risks and impacts of the Project and propose mitigation measures; (b) specify appropriate roles and responsibilities for the implementation of activities; (c) outline the necessary reporting procedures, for managing and monitoring E&S issues related to the activities; (d) identify the training and capacity building needed to successfully implement the provisions of the ESMP; (e) establish the budget requirements for implementation of the ESMP.

This ESMP should be read together with the Stakeholder Engagement Plan (SEP) that have been prepared for the Project.

<sup>2</sup> For further information on Project components please refer to Project Appraisal Document (PAD) of the MSIP available at: <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/726481585965774365/turkey-municipal-services-improvement-project>



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## 2 PROJECT DESCRIPTION AND ACTIVITIES

Due to the city's expansion towards the eastern region and the increased population in recent years, there is a need to resize the water supply transmission lines. Therefore, the Eastern Region Drinking Water Supply Project was prepared to meet the water needs of a total of 694,960 people which is the total of the projected local population of 657,850 people in 31 neighborhoods of Melikgazi and Kocasinan districts, and the estimated 36,840 remaining Syrian population settled in the project area in Kayseri Province by the year 2057. The Eastern Region Drinking Water Supply Project, which aims the transfer of the main water sources exist in the western part of the city to the project area in order to meet the demands of the eastern region, will be implemented in two stages as presented in Annex-1.

This document covers the first stage which is the Eastern Region 1<sup>st</sup> Stage Drinking Water Supply Project (the Project).

### Eastern Region 1<sup>st</sup> Stage Drinking Water Supply Project

The water from the 24 wells in the Dokuzpınarlar catchment area, is currently being conveyed to the existing 5000 m<sup>3</sup> capacity Beştepeler drinking water storage reservoir with a total flow of 1350 l/s. Within the scope of this project, the excess of 800 l/s of water conveyed to the Beştepeler storage reservoir will be elevated with the planned Beştepeler pumping station and transferred to the existing Talas 15,000 m<sup>3</sup> drinking water distribution reservoir.

Due to the insufficient capacity of the depots to meet the water needs of the population in the eastern region, the first phase of the project will also include the construction of a 5000 m<sup>3</sup> capacity drinking water distribution reservoir next to the existing Konaklar distribution reservoir and a 2500 m<sup>3</sup> capacity drinking water distribution reservoir next to the existing İldem distribution reservoir. Although the transmission line to fed these reservoirs will be constructed at the second stage, these reservoirs will be connected to the existing reservoirs to include them into the existing water distribution system.

The works to be carried out within the scope of the Project are summarized below and presented in Figure 2-1;

- Construction of the Beştepeler pumping station.
- Construction of the gravity line between the existing Beştepeler storage reservoir and the planned Beştepeler pumping station (Ø1200 mm, steel = 10,00 mm, L= 106 m).
- Construction of the transmission line between the planned Bestepeler pumping station and the existing Talas distribution reservoir (Ø1000 mm, steel = 10,00 mm, L = 7,900 m)
- Construction of the auxiliary structures on the transmission line (washout chamber, air relief valve chambers, Ø400- Ø 450 mm discharge lines, isolation valves, water hammer prevention chamber, etc.)
- Construction of the Konaklar 5000 m<sup>3</sup> distribution reservoir next to the existing Konaklar distribution reservoir
- Construction of the İldem 2500 m<sup>3</sup> distribution reservoir next to the existing İldem distribution reservoir
- Construction of the displacement lines between the existing and planned reservoirs in Konaklar and İldem. (Ø800 mm. steel E, L = 200 m. -Ø400 mm. steel E= 5.60 mm. L = 60 m)

The construction of the transmission line between the planned Bestepeler pumping station and the existing Talas distribution reservoir involves two horizontal drillings and one bridge crossing as shown in Figure 3-1. First horizontal drilling will be carried out to pass the DSI channel coming from National Garden opposite Erciyes University. Second horizontal drilling will be carried out as a road and rail system line crossing at the turning point from Talas boulevard to Talas 15,000 m<sup>3</sup> capacity drinking water reservoir. The bridge crossing will be applied at the DSI flood open channel crossing, which is located before the rail system transition.



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KASKİ will be the owner of the proposed drinking water transmission line, pump station and reservoirs after construction. KASKİ will be responsible for operation, repairs and maintenance of the whole system. During the 12 months defects liability period, the Works Contractor will be responsible for any repairs of the newly constructed facilities, in accordance with legal regulations as of provisional acceptance. During operation, operator team assigned by KASKİ will ensure compliance of drinking water parameters comply with Regulations. Ministry of Health, General Directorate of Public Sanitation will regularly control water parameters in the network and in the reservoirs.





KASKİ has functional and effective SCADA and GIS system consisting all the technical hardware/software as well as expertise for proper operation of these systems. Integration of the proposed project components into this SCADA system and continue water flow and pressure measurement online will ensure detection of the water losses on time and effective operation of the whole system.

The Project is planned to be implemented in the period from March 2024 till April 2027 including design review and construction tendering, construction (18 months) and 12 months defects liability period.

### **Eastern Region 2nd Stage Drinking Water Supply Project**

The second stage which is expected to start in 2030s, will include the construction of the water transmission line between the Talas storage reservoir and the Konaklar and Ildem distribution reservoirs. Currently, as shown in Annex-1, existing Ildem and Konaklar reservoirs are fed from different systems.

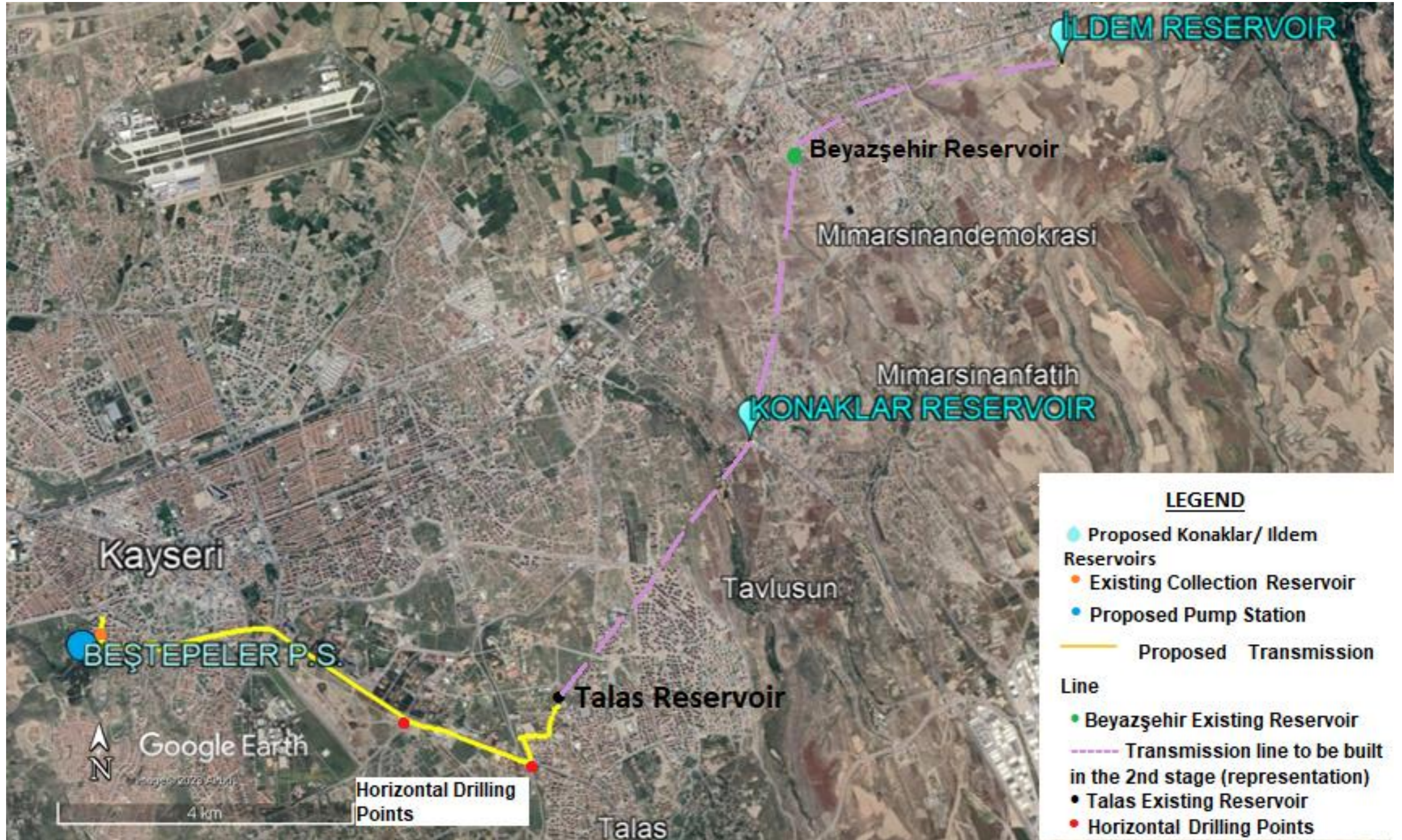
The proposed project components and the representative depiction of the transmission line that will

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Figure 2-1 Proposed Project Components





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In addition, photographs of the project area taken during the field study are shown in Figure 2-2.

Figure 2-2 Site Pictures

### Beřtepe Water Production Center



### The location of the planned Beřtepe PS



### Existing Water Pumping Station



### Water Pump Building



### Existing Water Tank



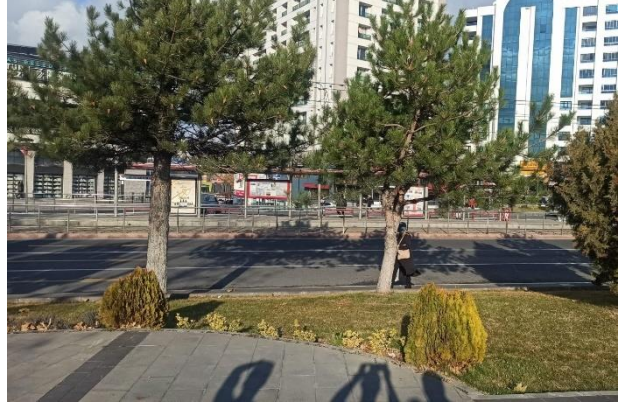


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Line on Which Suspended Transmission will be Made



The Area Where Horizontal Drilling Will Be Carried Out Under the Rail System



In Addition to the One In Konaklar District, A 5000 m<sup>3</sup> Ildem Reservoir 2500 m<sup>3</sup> Available +2500 m<sup>3</sup> to be Capacity Reservoir Will Be Added To The Same Land. Added



Talas 15,000 m<sup>3</sup> drinking water tank end point







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### 3 BASELINE DATA

Project location is in Kayseri Province Centrum. Proposed project will serve to 31 centrum neighborhoods in Kocasinan and Melikgazi Districts of Kayseri Province.

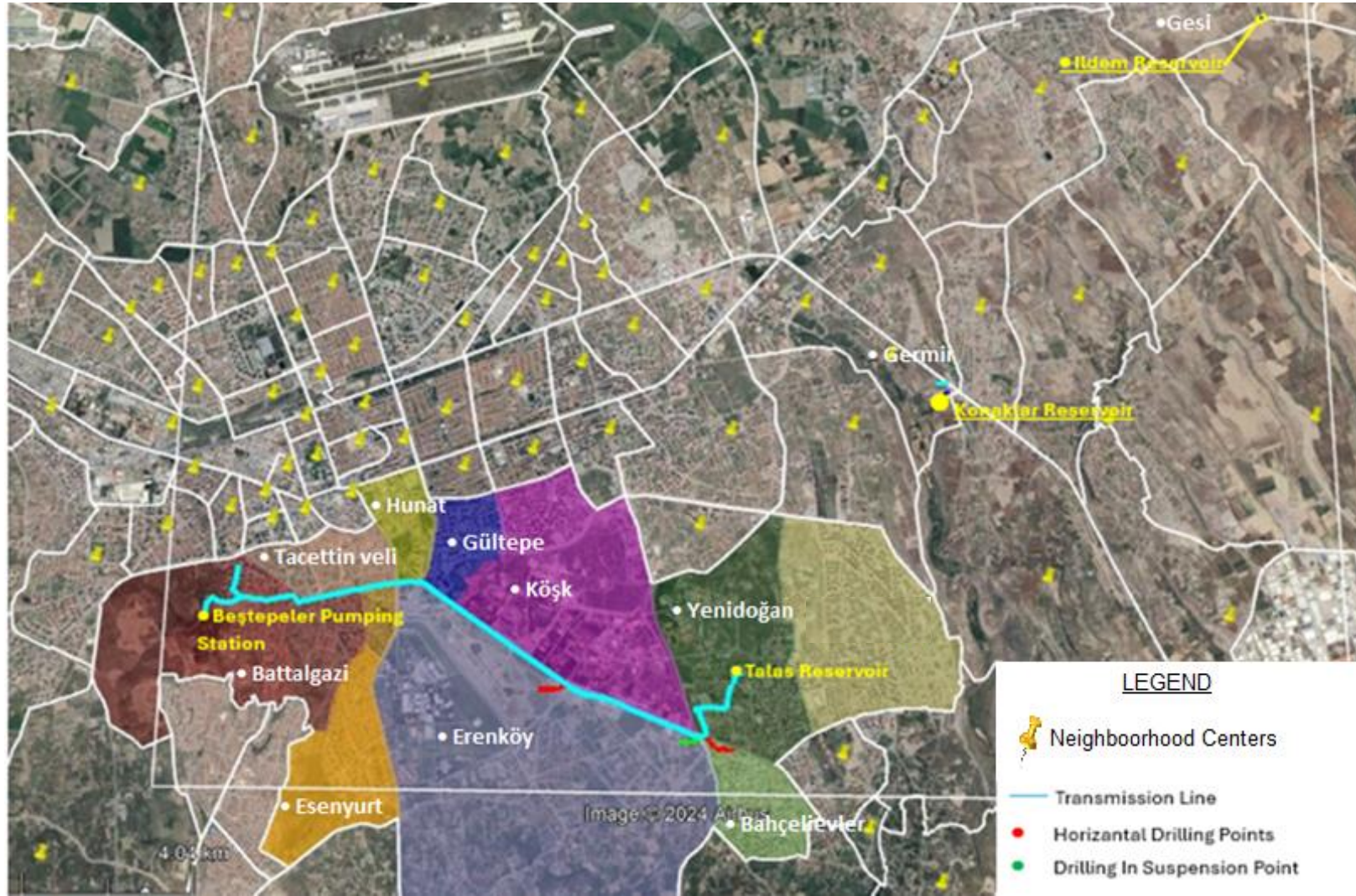
Kayseri is located in central Anatolia neighboring Sivas and Kahramanmarař on the east, Adana and Niđde on the south, Nevřehir on the west, Yozgat and Sivas on the north. It is 316 km far to Ankara. Kayseri Metropolitan Municipality area is composed of five districts: the two central districts of Kocasinan and Melikgazi, and since 2004, also outlying Hacilar, İncesu and Talas. Whole centrum covers 3,644 km<sup>2</sup> area. The project location also the line and drilling points are shown below in Figure 3-1.

		1 6		
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Figure 3-1 Project Location



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### 3.1 Physical Environment

#### Natural and Cultural Resources

Project area is not located in or adjacent to any protection areas. Within the borders of Kayseri province, there are total protected area of 81,965.5 ha. The ratio of protected areas to the provincial area is 4.8%. In addition, 2 of the 3 wetlands within the provincial borders are wetlands of international importance. Protected areas in the province are the most important biodiversity reserves. Protected areas in Kayseri province are as follows:

- Aladağlar National Park (160 km to Kayseri Centrum)
- Sultan Sazlığı National Park and RAMSAR Area (90 km to Kayseri Centrum)
- Derebağ Waterfall Nature Park (90 km to Kayseri Centrum)
- Tuzla Palas Lake Wetland Area (60 km to Kayseri Centrum)
- Hurmetci Sazligi Wetland Area (18 km to Kayseri Centrum)

#### Earthquake

Kayseri and its surroundings are a very important region in terms of tectonics. Kayseri is located on a zone that is very important for Türkiye's geology, especially the Ecemiş Fault Zone (Ecemiş Corridor). These faults, most of which are active, are very important for the seismicity of the region. Earthquakes with magnitude 4.0 and greater that effected Kayseri centrum in last 50 years are given in the following Table 3-1.

Table 3-1 Earthquakes with Magnitude 4.0 and Greater in Kayseri and Surroundings

Area	Year	Magnitude	Area	Year	Magnitude
Palu(elazığ)	1977	5.2	Kahramanmaraş (Pazarcık)	2023	7.8
Bulanık(Muş)	1982	5.2	Kahramanmaraş (Elbistan)	2023	7.6
Sürgü (Malatya)	1986	5.6	Gaziantep (Şehitkamil)	2023	7.4
Ceyhan(adana)	1998	6.3	Hatay (Samandağ)	2023	6.4
Kayseri güneşli	2008	4.9	Niğde (Bor)	2023	5.3
Kayseri Sarıoğlan	2011	4.5	Kayseri (İncesu)	2023	4.4
Kayseri Sarıoğlan	2011	4.4	Kayseri (İncesu)	2023	4.7
Kayseri Palas Sarıoğlan	2016	4	Kayseri (Hacılar)	2023	4.4
Elazığ (Sivrice)	2020	6.8	Kayseri (İncesu)	2023	4.3
Malatya (Pütürge)	2020	5.7	Kayseri (Hacılar)	2023	4.9
Elazığ (Kavaktepe)	2020	5.6			

Considering the existence of active faults close to the study area that may produce small-medium-large scale earthquakes in the future, it is necessary to take into account the seismic risk in the design and to comply with the provisions of the “Turkish Building Earthquake Regulation (2018)”.

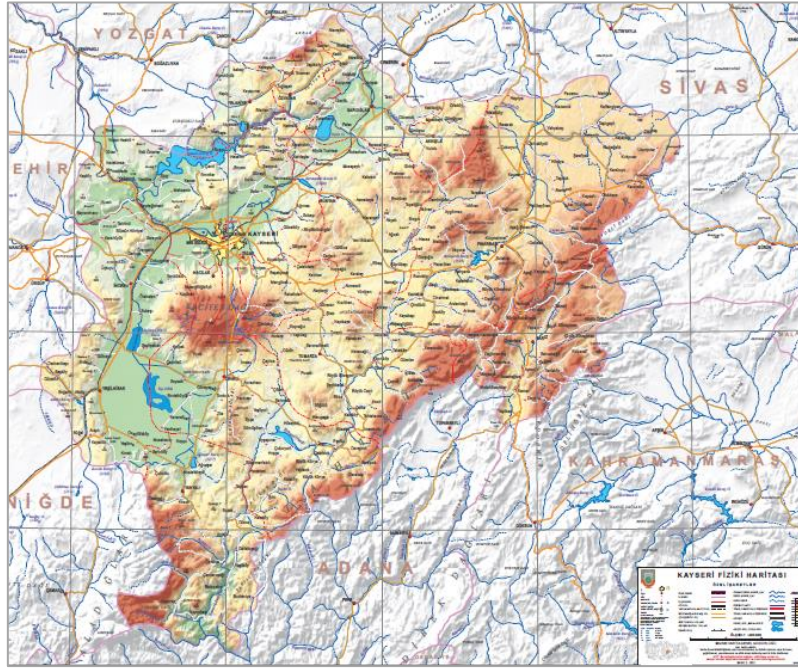
#### Topographic Situation

Kayseri is located in a topographical basin bordered by high mountains and hills from the south and north. The fact that the province is surrounded by high mountains and hills greatly hinders air circulation. The mountains in the province area are in three rows. These mountains are separated from each other by depression basins and high plateaus. The most important and highest mountain of Kayseri province is Mount Erciyes, with a height of 3,916 meters. Mount Erciyes is an extinct cluster volcano with many secondary volcano hills on its chest and foothills. Other important mountains are Hınzır Mountain (2,500 m.), Dumanlı Mountain (3,024 m.), Bey Mountain (2,054 m.), Binboğa Mountain (2,856 m.), Tahtalı Mountain (2,100 m.), Soğanlı Mountain (2,100 m.), Rostan Mountain (2,100 m.), Aladağ and Hodul Mountains, Aygörmez and Kızılıviran Mountains, Bakır Mountain.



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Figure 3-2 Kayseri Province Physical Map



Kayseri Plain, which covers the north of Erciyes Mountain, constitutes one of the largest plains of the province and the Upper Kızılırmak region, with a surface area of approximately 890 km<sup>2</sup>. The length of Kayseri Plain reaches 40 kilometers from near Erkiilet to Gömeç Village in the east. Develi Plain, with a surface area of approximately 1000 km<sup>2</sup>, is one of the largest plains in the Upper Kızılırmak region, where Kayseri is located. The east-west length of the plain extending between Develi-Yeşilhisar districts reaches 30 kilometers.

### Climate

Kayseri Province has typical Central Anatolian terrestrial climate which is hot and dry in summer months and very cold and with precipitation in winter months. However, the provincial climate varies from place to place depending on altitude. Accordingly, while the climate in the province is softer in the regions remaining in the lower area, it becomes harsher as you move from the plateaus to the mountainous areas. According to Köppen and Geiger, this climate is classified as Csa. The mean temperature prevailing in the city of Kayseri is recorded as 10.5 °C, according to statistical data. Each year, there is an approximate 564 mm of precipitation that occurs.

The month with the least amount of precipitation is August exhibiting a mere 7 mm rainfall. Most precipitation falls in May, with an average of 87 mm. The month of August boasts the highest average temperature, with a recorded maximum of 23.0 °C. In January, the average temperature is -2.5 °C. It is the lowest average temperature of the whole year. There is a notable variation in precipitation levels between the driest and wettest months, amounting to 80 mm. The average temperatures vary during the year by 25.6 °C. Average Temperature and Precipitation Data shown below Table 3-2

Table 3-2 Average Temperature and Precipitation Data

	1	2	3	4	5	6	7	8	9	10	11	12
<b>Avg. Temp. (°C)</b>	-2.5	-0.7	4.2	9.6	14.3	18.8	22.6	23	18.8	12.6	5.7	-0.1
<b>Min. Temp. (°C)</b>	-6.8	-5.4	-1.2	3.6	8.2	12.5	15.6	16.2	12.5	7.1	0.9	-4.3
<b>Max. Temp. (°C)</b>	2.1	4.3	9.7	15.3	19.9	24.6	29.1	29.7	25	18.5	11.2	5
<b>Precipitation (mm)</b>	54	48	69	80	87	51	10	7	21	40	44	53
<b>Humidity (%)</b>	76%	73%	65%	59%	56%	48%	38%	37%	39%	52%	62%	71%
<b>Days of Precipitation</b>	7	7	9	10	11	7	2	1	3	5	5	7
<b>Hours of sunlight (hrs)</b>	5.8	6.6	7.7	9.2	10.6	11.8	12.2	11.8	10.4	8.4	7.1	6.1



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## Soil and Land Composition

According to the database of Ministry of Agriculture and Forestry regarding Kayseri Province, the area of 869,062 hectares, which constitutes approximately 51.22% of the whole area, is agricultural areas. Forests and semi natural forests cover 751,221 ha which constitutes 44.28% of the whole area. Artificial area is 29,979 ha. The land usage classes of whole Kayseri Province are shown as in the following Table 3-3.

Kayseri Province Centrum includes 5 centrum districts, and when land usage classes are analyzed for these districts, around 5-10% artificial areas observed compared to whole Kayseri province land composition classes.

Table 3-3 Land Usage Classes of Kayseri Province

Land Usage Classes	ha	%
1) Artificial Areas	29,979.5	1.77
2) Agricultural Areas	869,061.6	51.22
3) Forest and Semi-Natural Areas	751,221.0	44.28
4) Wetlands	26,260.6	1.55
5) Water Masses	20,143.9	1.19
<b>TOTAL</b>	<b>1,696,666.6</b>	

Legend:

- 1) Artificial Areas
- 2) Agricultural Areas
- 3) Forest and Semi-Natural Areas
- 4) Wetlands
- 5) Water Masses

Source: <https://corinechs.tarimorman.gov.tr/>

## 3.2 Land Use and Land Requirements

As described in Section 2, within the Project, one pumping station, 2 water reservoirs and a transmission line will be constructed.

### Beştepeler Pumping Station (PS)

Proposed Beştepeler PS is located in Melikgazi District, Karacaoğlu neighborhood on lot 76 of block 11216 (Figure 3-3). Currently, most of the parcel is utilized as cemetery, and the area where the pumping station will be built is used by KASKI. There is an administrative building, existing pumping station and a hangar in the area used by KASKI. The Consent Letter from the Kayseri Metropolitan Municipality regarding the construction on lot 76 of block 11216 is given in in Annex-2. Ownership of the lot 7 and 8 of block 11216 belongs to KASKI (Annex-3).

There are no formal or informal users on the parcels.



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Figure 3-3 Beřtepelers Pumping Station





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## Konaklar Reservoir

Figure 3-4 Konaklar Reservoir below shows that the location of the Konaklar reservoir is outside the cadastre. The zoning plan of this area has been made and is shown in Figure 3-5. In the area, there is the Konaklar reservoir and well building belonging to KASKİ. The reservoir area in Konaklar region belongs to KASKİ. There are no other official or unofficial users.

Figure 3-4 Konaklar Reservoir

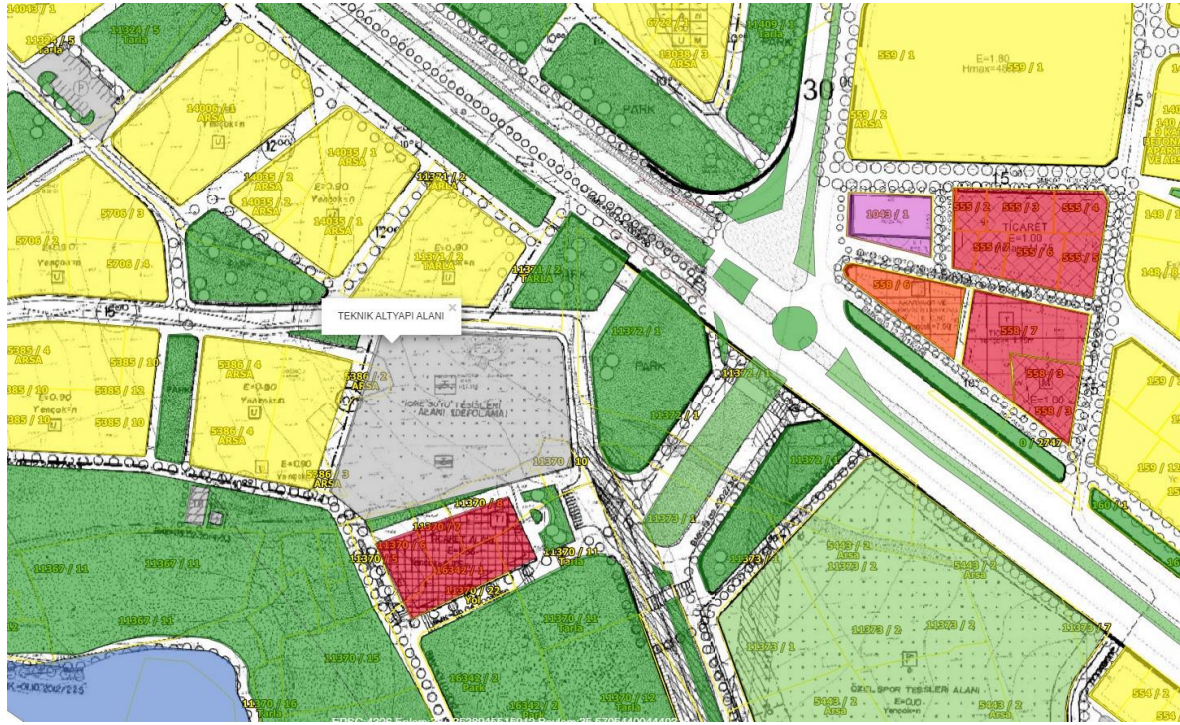






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Figure 3-5 Zoning Plan



### Ildem Reservoir

Proposed İldem 2,500 m<sup>3</sup> reservoir is located in Melikgazi District, Gesi neighborhood on block 245 and lot 1. Although, the existing Ildem resevoir on the parcel belongs to KASKI, the parcel belongs to the Directorate General of National Property of the MoEUCC. A letter has been written to the Directorate General of National Property and the response is awaited (Annex-4). Figure 3-5 shows Ildem Reservoir location.

There are no formal or informal users on the parcel.



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Figure 3-6 Ildem Reservoir





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### Transmission Line

The transmission line will be constructed between the planned Beřtepelers pumping station and the existing Talas reservoir.

Talas reservoir is located in the Talas neighborhood of Talas district on lots 0 of blocks 406, 408, 409 and 410. The land belongs to KASKI and its title deeds are shared in Annex-5. There are no formal or informal users on the of the existing reservoir. Below Figure 3-6 is the map sheet of the region showing that the Talas reservoir location.



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Figure 3-7 Talas Reservoir Location



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The transmission line will be constructed on the existing roads which are under responsibility of Kayseri Metropolitan Municipality. The roads are open for traffic and there are no private parcels on the road. Therefore, drinking water transmission line do not require any private land. Route of the transmission lines shown in below Figure 3-7



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Figure 3-8 Route of the Transmission Lines



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### 3.3 Socio-economic Environment

This section compiled quantitative and qualitative data regarding the current social condition of the Project. The socio-economic baseline study is intended to describe socio-economic conditions and trends in areas that are potentially affected by the Project to have an understanding of potential impacts and to develop appropriate mitigation measures. The socioeconomic baseline identifies major socio-economic issues in the province and local communities and develops a socio-economic database that can be leveraged to monitor any post-Project changes in affected communities. The following topics were selected to discuss the socio-economic indicators of the settlements around the project area:

- Demography and Population
- Livelihoods
- Education
- Health
- Vulnerable Groups
- Land Acquisition
- Traffic and Road Safety

The obtained primary data regarding the project was derived through surveys conducted and telephone conversations. The conversations to collect primary data include:

- Interview with Melikgazi Municipality,
- Interview with Talas Municipality,
- Kayseri Metropolitan Municipality Land Registry and Expropriation Branch Directorate
- Kayseri Provincial Directorate of Environment, Urbanization and Climate Change and
- In-depth interview with the headmen of the project-affected neighborhoods.

Secondary data has an important role in reaching key stakeholders and project-affected people before designing the field study. The information obtained from secondary data enhances the quality of field studies and time efficiency during field studies. This set of data was collected and prepared using regional and national statistics and project documents.





#### Limitations

Although the Project will serve 31 neighborhoods during the operational phase, almost all of the Project's environmental and social impacts will be observed during the construction phase of the Project. Appointments for face-to-face interviews were made prior to the site visit.

The neighborhoods in the AoI are as follows: Köşk, Battalgazi, Tacettin Veli, Gültepe, Bahçelievler, Erenköy, Hunat, Esenyurt, Yenidoğan, Konaklar and İldem Cumhuriyet neighborhoods. While determining the 500 m distance, the environmental and social impacts that will arise from the Project have been taken into consideration and it is foreseen that these impacts will remain within the determined distance.

A site visit was conducted on December 12-13, 2023. During the field visit, it was planned to conduct interviews with the mukhtars of the neighborhoods in the AoI of the Project, and face-to-face interviews were held with the Mukhtars of Battalgazi, Köşk and Erenköy Neighborhoods. However, due to their unavailability during the planned hours, interviews were conducted with the Mukhtars of Yenidoğan, Gültepe, Tacettin Veli, Hunat, Bahçelievler and Esenyurt neighborhoods by phone after the field visit. Bahçelievler and Esenyurt Neighborhood Mukhtars stated that they had no concerns about the Project during the interview and ended the interview. In addition, the Mukhtars of Konaklar and İldem Cumhuriyet Neighborhoods could not be reached during and after the site visit and will be invited to attend the Stakeholder Consultation Meeting (SCM) to be held after the Project documents are finalized. Any concerns/grievance they may raise during the SCM will be recorded.

#### Demography and Population

		3 0	 THE WORLD BANK IBRD • IDA   WORLD BANK GROUP	 PROJE MÜŞAVİRLİK MÜHENDİSLİK TİCARET LTD. ŞTİ.
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The location of the project is Kayseri city center. The Project will serve 31 central neighborhoods in Kocasinan and Melikgazi Districts of Kayseri Province, especially in the eastern part of Kayseri center.

The population of Kocasinan Municipality is 407.600. The central population of the district is 407600, of which 202965 is male and 204635 is female. There are 116 neighborhoods connected to the District Municipality. The population of Melikgazi Municipality is 294.983. The population of the District Center is 585483, 290500 of this Central population is male and 294983 is female. There are 81 neighborhoods connected to the district.

Population details, obtained from public sources and neighborhood mukhtar as a result of conducted field studies, are as follows.

The highest population ratio is in Mevlana neighborhood, while the lowest population ratio is in Hunat neighborhood among the neighborhoods within the project area. After interviews conducted with the mukhtar, it was predominantly expressed that population was increasing in the neighborhoods; the reason for which was employment need developing throughout the district.

Finally, it was inquired whether there were immigrants and/or refugees in impacted settlements. Accordingly, it was mentioned that Syrian, Afghan and Iraqis asylum seekers settled in.

### **Means of Livelihood**

The main source of income of the neighborhoods are pension, civil service, with regular paying jobs, tradesmanship, which is located within the impact area of the project.

In interviews with mukhtars, it was learned that refugees in the neighborhoods work in regular salaried jobs and daily wage jobs in the industrial sector.

### **Education**

- In the neighborhoods in the Aol of the project, the list of schools located within 500 m of the areas where the studies will be carried out is as follows<sup>3</sup>: Yenidođan Neighborhood Mehmet Cemile Ođulcuklu Primary School

#### **Gültepe Neighborhood**

- Mimar Sinan Technical and Industrial Vocational High School

#### **Tacettin Veli Neighborhood**

- Yunus Büyükkusođlu Imam Hatip Secondary School
- Istiklal Special Education Vocational School
- Kayseri Kadi Burhaneddin Vocational and Technical Anatolian High School
- Private Istikbal Primary School
- Nuri Has Middle School

#### **Battalgazi Neighborhood**

- Battalgazi Şehit Selim Şener Secondary School
- Malazgirt Secondary School
- Somuncubaba Anatolian Imam Hatip High School
- Kayseri Simya College
- Özel Nida School for the Disabled
- National Sovereignty Primary School
- Battalgazi Şehit Selim Şener Secondary School
- Ulfet Kizikli Primary School

#### **Erenkoy Neighborhood**

<sup>3</sup> Retrieved from <https://kayseri.meb.gov.tr/>





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## ➤ Private Caybaglari Bilfen Kindergarten

### Hunat Neighborhood

- Merkez Vocational and Technical Anatolian High School
- 

### Konaklar Neighborhood

- Bahçelievler Neighborhood Talas Ataturk Vocational And Technical Anatolian High School
- Şehit Binbaşı Mahmut Şahin Secondary School
- Şehit Binbaşı Mahmut Şahin Primary School

### İldem Neighborhood

- İldem Şehit Abuzer Dođan Kindergarten
- İldem Borsa Istanbul Secondary School
- Hakki Altop Primary School

## Health

In the neighborhoods in the Aol of the project, the list of health centers within 500 m of the areas where the works will be carried out is as follows<sup>4</sup>:

### Tacettin Veli Neighborhood

- Specialist Dental Hospital
- Kayseri Eye Hospital
- Kayseri Kızılay Hospital
- Private Erciyes Kartal Hospital
- Special Hüma Hospital
- Detagen Genetic Disease Evaluation Center
- Hüma IVF Center
- Private Maya Dental Oral and Dental Health Center

### Köşk Neighborhood

- Erciyes University Faculty of Medicine Gevher Nesibe Hospital
- Yilmaz and Mehmet Oztaskin Heart Hospital
- M. Kemal Hemolotology and Oncology Hospital
- Sahinur Dedeman Bone Marrow Transplant and Stem Cell Treatment Center
- Erciyes University Fevzi Mercan Children's Hospital
- Haşçelik Application and Research Center

## Maya Eye Hospital Vulnerable/Disadvantaged Individuals or Groups

During the Community Level Survey conducted with neighborhood mukhtar, information on vulnerable groups was inquired and the following groups were identified within the scope of the field study.

Elderly people over the age of 70 living alone and in need of care (41 people in total according to the information received from neighborhood mukhtars) may experience difficulties in accessing activities and communicating their complaints due to the lack of necessary physical support.

In addition, according to information received from Mukhtars, a total of 482 households are refugees and asylum seekers (Afghan, Syrian, Iraqi, etc.), who may have difficulties in communicating their grievances or participating in stakeholder engagement due to language barriers.

<sup>4</sup> Retrieved from <https://kayseriism.saglik.gov.tr/>



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Moreover, according to information received from mukhtars, there are approximately 850 persons with disabilities within the impact area. During the construction phase, precautionary measures need to be taken for these individuals to address issues such as road closures, especially due to project activities.



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## 4 ENVIRONMENTAL AND SOCIAL ASSESSMENT

During construction and operation phases of the Project, environmental and social risks and impacts caused by project activities may arise. Any potential risks and impacts of the Project during the construction phase would be generally short term with low magnitude that would be locally significant. These impacts would mostly be related to traffic, noise, vibration, air quality, soil disturbance and contamination, waste management, community health and safety, and labor and working conditions (including occupational health and safety).

EIA exemption letter dated 16.01.2024 and numbered 8510679 for the project is available and shared in Annex 6.

### 4.1 Impacts on the Physical Environment

#### **Land Use, Soil and Geology:**

##### **Construction Phase**

The excavation of trenches for the water transmission and network pipes and reservoirs to be newly constructed will have some minor impacts on the soil environment. However, these impacts are on project footprint and restricted to the construction sites. The potential impacts will consist of:

- Leakage and spill of fuels, and oils to be used for the construction machinery and equipment create soil contamination risk.
- During replacement of the pipes, soil contamination risk can occur.
- Soil erosion and contamination because of oil or fuel leaks or spillage that may result from incidents and unexpected events.
- Alterations of the natural soil and land structure because of soil stripping, levelling excavation and filling activities, work of construction machinery, especially locations where the new reservoirs will be constructed.
- Uncontrolled storage or disposal of solid and/or liquid waste can cause soil pollution.
- Piling of soil along public routes and improper reinstatement of soil to its original position.

These impacts can be easily managed and mitigated to negligible in significance with the implementation of the mitigation measures given in Table 5-1

##### **Operation Phase**

In the operation phase of the Project, the activities will have a limited physical interaction with the environment. No additional significant direct impacts on topography, soil and land use are anticipated under normal operating conditions. Impacts of operation phase of the Project are related with:

- During repair and maintenance works, such as spillage/leakage of oil, and chemicals to soil and the permanent land use change where new reservoirs to be constructed.
- The staff will be trained in proper management of liquid waste to avoid soil contamination during maintenance and repair works.
- The amount of soil that could be subject to contamination will be minimized by ensuring the use of only the designated worksites and routes for the machinery and equipment and field personnel during maintenance and repair works.
- Machinery and equipment will be checked regularly for leaking oil and fuel.
- In the event of an accident, leak or spill, necessary repair works and/or replacement of parts will be performed promptly in accordance with the standards.
- Provisions of the Regulation on the Control of Soil Pollution and Sites Contaminated by Point Sources will be complied with.
- Wastes and wastewater (rainfall filled in trenches) to be generated during the during maintenance and repair works will be stored and disposed of in a controlled manner in accordance with the relevant regulations and in line with the management practices described in this report. Thus, it will not be possible for the waste and wastewater to be generated in the project area to interact with the soil environment and cause any impacts.



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These measures aim to minimize environmental impacts and form an effective strategy to address potential issues during the project. It is crucial to ensure compliance with environmental standards and local regulations.

### **Air Pollution, Noise and Vibration:**

#### **Construction Phase**

The major impacts on air quality during the construction phase of this project will be related with the material handling, vehicle movement, excavation and backfilling, compaction works and emissions from heavy construction machinery (trucks, excavators, etc.).

Air pollution will be mainly dust emissions and exhaust emissions as well as Greenhouse Gas (GHG) emissions. The sensitive receptors that will be exposed to these air emissions will be the local population who lives near the construction sites. During construction phase of the project, impacts on air quality will be mainly due to dust emissions caused by:

- Dust emission during the site preparation, excavation, backfilling, and compaction works performed for the construction works.
- Dust emission due to the vehicle movement for transportation of various construction materials to the project site.
- Exhaust emissions from vehicles used in construction activities.
- GHG emissions generated from vehicles and machinery in small amounts.

These air quality impacts will be limited in terms of area and short-term since there will be a limited number of equipment and machinery operating on site. In addition, the water distribution network will follow the cadastral roads and the construction will be performed gradually. Therefore, the receptors will be limited to the ones located near the construction sites.

Various measures and solutions to address these potential impacts are as follows:

- The impact of the dust formed during the construction phase will be mitigated by watering the network routes and roadside embankment, regulating the time intervals of the works, controlling the vehicle speeds, and covering the tops of the transportation vehicles with tarpaulin.
- The top of the excavated material will be wetted to prevent dust formation.
- Loading/unloading will be carried out carefully without scattering.
- Windshield and barriers will be used in the working area depending on wind conditions.
- Trucks hauling excavation material will be covered, the material will be prevented from scattering during transportation, and the roads will be cleaned quickly if the material is scattered.
- Care will be taken during filling and unloading of the material.
- The route to be used in the transport of the excavation will be carefully selected and care will be taken not to pass through the densely populated areas.
- Care will be taken to enforce speed limits for transport vehicles. Accordingly, the speed limit will not exceed 30 km/h on roads with poor coating.
- To prevent the effect on the air quality from affecting the working and resting activities, the construction activities will be carried out at the determined time of period, and this determined time interval will be announced beforehand to the residents who will be affected by the construction activities through the means of communication tools of KASKİ and Contractors/Subcontractors.
- Compliance with the air emission limit values stipulated in national legislation and WBG General EHS Guidelines will be ensured.
- Dust measurements will be conducted if any grievance regarding dust generation is received and mitigation measures will be enhanced in this respect such as increasing wet suppression/watering activities, further reducing speed/traffic, etc., if deemed necessary, considering both national and WBG EHS Guidelines limit values.
- In accordance with the “Exhaust Gas Emission Control Regulation”; vehicles with traffic inspections, exhaust gas emission measurements will be used, and vehicles that need maintenance will be taken



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into maintenance after routine checks and other vehicles will be used until their maintenance is completed.

- Each vehicle to be used for transport during the construction phase shall have the “Motor Vehicle Exhaust Emission Measurement Stamp”. The measurement stamp will be renewed every year by measuring exhaust gas.
- Routine inspection and maintenance of the vehicles used for transportation will be performed (daily and periodically). Maintenance forms will be filled out regularly.
- The use of fuel conforming to standards will be ensured.

The project activities within the construction phase are associated with a range of activities that generate noise. The noise would be potentially generated by transportation vehicles, machinery, and outdoor equipment to be used for preparation of the site and the construction activities, pipe placement /replacement, trench filling, and paving and asphaltting. Noise impacts will not exceed the levels presented in the WBG General EHS Guidelines or result in a maximum increase in background levels of 3 dB at the nearest receptor location off-site. Construction of the water distribution network will affect inhabitants living on the network route, but this impact will be short term and low in magnitude.

### **Operation Phase**

Dust and emission gases are likely to occur within the scope of maintenance and repair works. However, the operation phase of the project is not expected to cause significant dust and exhaust emissions. This impact will be low when the appropriate mitigation measures in Table 5-1

The release of chlorine gas into the atmosphere poses a threat to all living things. Chlorine gas released into the atmosphere by the residual chlorine rooms within the scope of the Project, especially in the case of a gas leakage in the facilities close to the residential areas, poses a serious risk for human health. For this reason, chlorine gas leakage detectors will be applied to these facilities in order to prevent any problem that may arise. This risk has been assessed as medium in significance for operation phase if the mitigation measures given in Table 5-1 are not implemented.

GHG emissions are expected to be generated during the operation phase as well, however, there will not be a continuous heavy vehicles usage due to the Project activities such in the construction phase, this impact is assessed as negligible for the operation phase.

The noise will also be generated by repair and maintenance works. Vehicles and maintenance equipment and machinery will be used temporarily, and the number of vehicles will be limited during repair and maintenance works. Therefore, noise impact resulting of these works is not expected to be significant during the operation phase of the project. The impact is assessed as direct and negative with short term duration, local and low in significance.

### **Water Resources and Wastewater:**

#### **Construction Phase**

During the construction phase, water supply requirements will occur due to the needs of workers and dust suppression. The drinking water needs of the employees will be met by bottled water purchased from the local market, and their domestic water needs will be met by connecting to the existing drinking water network. If accommodation will be provided for workers in the camping area, the resulting domestic wastewater will be connected to the existing sewer network, if possible, or if connection is not possible, it will be collected in impermeable septic tanks and then discharged to the nearest sewer network with vacuum trucks. Portable toilets will be provided for workers at construction sites. The waste from these toilets will also be collected into the storage tank inside the toilet and then discharged into the nearest sewer network.

For dust suppression, water will be provided to the site by water trucks with sprinkler systems. The quality of water that will be supplied to the Project shall follow the Regulation Concerning the Water Intended for Human Consumption together with WBG General EHS Guidelines.



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Minor short-term negative impacts due to surface runoff, muddy water filling the excavation trenches, etc. would occur during construction. Construction activities may also pose the potential for release of petroleum-based products, such as lubricants, hydraulic fluids, or fuels during their storage, transfer, or use in equipment. All chemical storage containers, including diesel fuel, and hazardous liquid waste drums/containers will be placed on impermeable surfaces/floors to minimize the risk of soil and groundwater contamination during construction and with secondary containment protection. In the construction phase of the Project, the impact on the surface water resources will be direct and negative with short-term duration, local and negligible in significance.

During the construction phase, the major impact on groundwater and surface water may be seen due to accidental oil leakages in the areas where the works with construction machinery are carried out as well as improper disposal of waste. This may affect the water quality in the project area, if necessary, mitigation measures are not taken. However, it can be said that the impacts will not be significant upon implementation of the mitigation measures and adherence to good engineering methods. It is assessed that in the construction phase of the Project, the impact significance will be negligible.

In addition, attention will be paid to pipes sitting in places with high groundwater levels. The decrease in the groundwater level will reduce the sitting height of the pipes and cause hydraulic problems. Soil dewatering will be carried out in these areas.

### **Operation Phase**

Although the proposed Project will have positive impacts on the water resources during the operation phase of the Project since the loss and leakages in the current network system will significantly be decreased, the regular maintenance works to be performed on the network might create impacts that are similar to the ones in the construction phase. In the operation phase, there will also be storage of some chemicals such as acids, bases, disinfectants, etc. All storage tanks and drums will be placed on concrete areas with proper secondary containments.

To conclude, operation phase impacts of the Project is generally found to be positive on water resources. However, measures should be taken to prevent any unexpected deterioration on the receiving water quality. During the operation phase of the Project, the impact will be direct and positive with long term duration.

Any impact on surface and groundwater resources is not anticipated in the operation phase providing that the water network is constructed with adequate measures. The repair and maintenance works are considered as construction works; therefore, the repair and maintenance staff will perform works by considering the construction phase impacts and comply with corresponding mitigation measures all the time. Therefore, the impacts will be negligible in significance upon adherence to good engineering methods.

During operation phase, an operator team assigned by KASKİ will ensure compliance with the drinking water parameters specified in the national and international legislation. Ministry of Health, General Directorate of Public Sanitation will regularly control water parameters in the network and/or in the reservoirs.

### **Waste Management**

Operations such as construction and installation of main process and auxiliary units, supply, distribution and installation of units and equipment will be carried out. The expected types of solid waste provided within the scope of these activities are: municipal waste, system equipment packaging waste (e.g. wood, cardboard, plastic, etc.), hazardous waste, special waste, excavation and construction waste (e.g. scraps, wood, concrete waste, etc.), and waste system costs (panels, cables, electronic systems). Hazardous and special wastes, separation of chemical substances (e.g. paint, solvent) or packaging materials and parts contaminated with oils, operation of machinery and machinery and the waste oils they contain, solvents, accumulators, batteries, filters, machine parts, etc. unified.



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During the construction phase of the Project, activities such as vegetation clearance, levelling, construction and installation of main operation and auxiliary units, procurement, transportation and assembly of units and equipment will be carried out. Solid waste types expected to be generated within the scope of these activities are municipal wastes, packaging wastes of system equipment (e.g., wood, cardboard, plastic, etc.), hazardous wastes, special wastes, excavation, and construction wastes (e.g., scrap metal, wood, concrete waste, etc.), and waste system equipment (panels, cables, electronic components). Hazardous and special wastes might contain chemical substances (e.g., paint, solvent) or packaging materials and cloths contaminated with oils, waste oils resulting from operation and maintenance of machinery and vehicles, solvents, accumulators, batteries, filters, machine parts, etc.

In the case of cooking at the cafeteria of construction site facilities and/or camp site, vegetable oil will be regularly collected and given to enterprises licensed and certified under the Regulation on Control of Vegetable Waste Oils and. Vegetable waste oils which are likely to occur during the construction phase will be collected in leakproof drums with corrosion-resistant internal and external surfaces and given to environmentally authorized and licensed vegetable waste oil plants for recycling.

If any asbestos pipe is encountered by the Contractor during the excavations, it will not be removed to the surface. In cases where asbestos pipes need to be brought to the surface, the principles of the Regulation on Health and Safety Precautions in Working with Asbestos will be followed. The work will be carried out by an asbestos removal specialist, who has a vocational training certificate.

Asbestos-containing waste will be transported and disposed of in accordance with Regulation on the Road Transportation of Hazardous Goods by signing a contract with a waste transport company licensed by the Ministry of Environment, Urbanization and Climate Change and an authorized waste disposal organization. Moreover, an Asbestos Management Plan will be prepared prior to construction works by the Contractor and implemented.

Waste generated during the construction phase of the Project will be managed in accordance with the waste management hierarchy, Turkish waste management regulations. A temporary waste storage area will be established, the waste generated will be separated in line with the Turkish waste management regulations and transferred/disposed of by the licensed companies. The contractor will take mitigation measures described in **Hata! Başvuru kaynađı bulunamadı.** but will not be limited to these measures. No significant impact resulting from waste generation is expected due to the nature and scale of the Project. However, the potential impacts can be reduced to a low level with the mitigation measures; therefore, the impact is assessed as direct and negative with short-term duration, local and low significance.

### **Protected Areas**

There are no protected areas defined by national legislation, internationally recognized important plant areas and archaeological sites within the Project area. Therefore, no hazards are foreseen for protected areas and important plant areas.

### **Visual Impacts and Landscape**

During the construction phase, visual impacts are anticipated due to the presence of construction vehicles, earthmoving, excavation and related construction activities. Proper re-establishment of the pipeline route and landscaping of the water reservoirs will be critical to mitigate visual impacts during the operational phase.

### **Biological Environment**

In the construction phase of the project, some direct or indirect impacts are expected to occur on biological environment and natural assets. The planned Project will be realized in an already modified area. There are no endemic species in and around the activity area. There is no danger of extinction as a result of the destruction in the activity area.



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The plant taxa identified in and around the Project area have been evaluated within the scope of ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources standards and there are no species that need to be taken under protection.

The project area is located on a bird migration route. However, there is no sensitive habitat or flora species found in the area, no significant impact is expected to occur such as sensitive habitat and vegetation loss during the construction activities of the Project.

The impact on the fauna species is assessed as direct and negative and low in significance.

### **Climate Change**

The Project's contribution to climate change during the construction phase will be due to the emission of greenhouse gas (GHG). The majority of GHG emissions will be due to construction machinery/equipment usage. The major greenhouse gas emission will consist of CO<sub>2</sub> emissions resulting from the combustion of petroleum-based products, like gasoline, in internal combustion engines. Relatively small amounts of methane and nitrous oxide will also be emitted during fuel combustion. Therefore, these emissions will contribute to climate change.

The project's contribution to climate change through GHG emissions is assessed as a negative and direct impact. The impact's extent will be regional, and duration will be short-term. Although the sensitivity of the receptors is considered as medium, due to the usage of small number of construction machinery/equipment, the significance of the impact is considered as low.

Resources such as water, fuel, electricity, etc. will be consumed during the construction activities by the machinery and the workers. In order to minimize the natural resource consumption, resource will be used efficiently and necessary mitigation measures will be taken as given in Table 5-1

### **4.2 Impacts on the Social Environment**

During the project construction, a procedure for chance finds of cultural heritage artifacts will be prepared and implemented. However, no impact is anticipated on existing cultural assets. The traffic impact will be local and reversible, with a traffic management plan prepared and implemented, including measures such as road closures and alternative routes. Prioritizing local procurement and employment will have positive effects, contributing to the local economy. Measures for community health and safety, including awareness campaigns and worker safety protocols, will be implemented. The Contractor shall take necessary measures such as perimeter fencing, railings, signs, announcements, etc. surrounding the work areas to prevent unauthorized access to the construction sites. Land acquisition and workforce management will follow specific procedures, with careful planning in advance.

In construction site security measures, the safety of property may take precedence over the safety of people. Security services need to address the protection of human life, providing a safe environment in the work area and providing safe means of transportation to the work area.

Furthermore, the project is not expected to escalate personal, communal, or interstate conflicts, crime, or violence. Vulnerable groups such as refugees, households with low or no income and the elderly will be considered, with appropriate measures and support provided. Risks such as gender inequality, indirect child labor and rights violations may be present in the supply chain. ESMP actions are defined to prevent these. Field supervision and monitoring will also be carried out by the lender's consultants. Other impacts are temporary and short-term.

### **Working Conditions and Workforce Management**

KASKI has a corporate functioning and human resources management based on laws and planned procedures. Although KASKI's human resources management is subject to the Civil Servants Law No. 657, the entire workforce for the project will be employed according to the provisions of Labor Law No. 4857..

There will be no accommodation due to local recruitment of labor and densely populated urban structure.





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The anticipated risks and impacts during the implementation of the project and the recommended mitigation measures are given below:

- In order to manage the risk of workers being paid less than they deserve, it is recommended to prepare a project labor cost analysis by anticipating inflation volatility in Turkey, increasing minimum wages and equally increasing insurance and taxes.
- The project has a multi-stakeholder governance structure, and this complex structure may lead to risks such as inappropriate workplace conditions, inconsistent application of standards for the workforce by different contractors, and missing complaints. Therefore, regular steering committees should be established with all parties involved. These committees should include the complaint mechanism representative in the project implementation unit and site managers.
- Because different contractors will be assigned different tasks throughout the project, information may not be distributed evenly. In-service trainings recommended in the report and prepared for the participation of all parties (Project Implementation Unit (PIU), contractors, KASKI personnel, etc.) and planned to be implemented in a standard order should be organized.
- If migrant workers will be employed, the contractor during the construction phase and KASKI during the operation phase will ensure that these workers have access to the labor grievance mechanism and fully understand their rights under national regulations.
- There may be risks in the supply chain such as failure to ensure gender equality, indirect child labor and rights violations. To prevent these, relevant ESMP (see Table 5-1) actions have been defined. Site inspection and monitoring will also be carried out by the lender's E&S consultants.
- Complaints in the field may be delayed and may not be recorded. SEP was developed to prevent this and includes a complaint mechanism. will be implemented.
- It may be possible that the construction sites established within the scope of the project are built with gender stereotypes and do not offer equal opportunities (such as shelter and showers). To prevent this, it is recommended to prepare gender-neutral planning and design.
- In construction site security measures, property safety can take precedence over people's safety.

It is recommended that security services also address the issues of protecting human life, providing a safe environment in the work area, and providing safe means of transportation to the work area.

### Labor Influx





Labor influx is not expected due to the densely populated urban structure. Although the risk of increased SEA/SH incidents is assessed as low due to worker-community interaction and no expected labor influx, KASKI and the Contractor will ensure that the code of conduct is understood by each worker and that all workers are provided with public communication training as orientation training to prevent potential future conflicts and unacceptable behaviors (e.g. gender-based violence, sexual harassment, sexual exploitation and abuse, etc.).

### Safety of Services

The presence of other infrastructure (gas and electricity lines) on the network routes may pose a risk. During the Project, KASKI and the Technical Support Consultant will coordinate with other institutions (such as gas and electricity company) and guide the Contractor appropriately. Since transmission lines will be constructed on urban road routes, noise/vibration, damage to common properties, roads, etc. and possible accident risks from construction activities are possible. Mitigation measures will be taken according to the requirements of E&S studies. The majority of the excavation depth will be 2.3 m, but in some places it will be up to 3-4 m. Excavations are expected to be of short duration in line with road/traffic planning and the contractor's capabilities.

### Traffic and Road Safety

During the transportation of construction materials, vehicle congestion is expected on some roads depending on the activities to be carried out. In such cases, road users will be directed to alternative routes and notifications will be made regarding busy roads. An increase in traffic load will be observed due to construction activities. The impact of the Project on traffic during the construction phase is

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assessed as negative and direct and the impact is considered moderate. On the other hand no impact is expected during the operation phase. The impact's extent will be local and reversible.

A project-specific traffic management plan will be prepared and implemented prior to construction works as part of the Contractor's Environmental and Social Management Plan.

Suspended Transmission Line will be constructed within the scope of the Project. Within the scope of the Project, Horizontal Drilling will be carried out under the Rail System. Environmental and HSE requirements will be fulfilled during implementation. Necessary permissions obtained from institutions before drilling. The permissions received from DSI and Transportation Inc. on the subject are shared in Annex-7 and Annex-8. The area where horizontal drilling will be carried out under the rail system shown in Figure 4-1

Figure 4-1 The Area Where Horizontal Drilling Will Be Carried Out Under the Rail System



Regarding the inner-city tram crossing; there will be a crossing under the tram line with horizontal drilling without interrupting the traffic. The tram line belongs to Kayseri Metropolitan Municipality. In the attached letter, the tram operator company is a company affiliated to Kayseri Metropolitan Municipality and gives the following information: "The 1000 mm diameter transmission installation will not harm the safety of the tram line, provided that the pipe top elevation passes at least 2.5 m below the rail top elevation and does not overlap with the catenary poles."

### **Management and Safety of Hazardous Materials**

The removal, transportation and disposal of asbestos pipes that will be exposed during excavation will cause health problems. If asbestos pipes encountered during the excavations, those will not be removed to the surface. In cases where asbestos pipes need to be brought to the surface, the principles of the Regulation on Health and Safety Precautions in Working with Asbestos will be followed. The work will be carried out by asbestos removal specialists, who have vocational training certificates. Specific precautions will be determined for managing ACM in this site-specific Asbestos Management Plan that will be prepared for safe handling and effective disposal of asbestos as required by the WBG EHS on asbestos management by the Contractor prior to the construction works.

Risks will be managed will be assessed, and these possible risks and impacts will be mitigated through the implementation of the Labor Management Plan, OHS Management Plan and Risk Assessment



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(including Emergency Plans) which will be developed by the Contractors during the construction phase and by the KASKİ during the operation phase in line with national Labor Law, WB ESS2 and WBG EHS Guidelines.

### **Community Health and Safety**

Necessary warning signs will be placed around the Project area within the scope of OHS Measures. Regarding the roads that are expected to be gradually closed along the transmission line, traffic trainings will be given to students by contacting the administrations of the schools located within 500 m of the roads. Traffic trainings will also be provided to the personnel working within the scope of the Project.

Construction sites will be fenced off, blocked with barriers, and phosphorescent or lighted warning signs will be placed around the construction sites to ensure that the works do not harm people living in the area (especially children, elderly, disabled people). Entry of personnel and third parties to the facility will be carried out in a controlled manner under the supervision of a security guard. A 24/7 security guard will be employed in the areas. Especially the areas where excavation works will be carried out will not be accessible except by authorized personnel.

### **Land Acquisition**

No private land was required for the project. Therefore, there will no expropriation or easement. In addition, since there are no formal or informal users on the lands where the project activities will be carried out, there will be no effect on the livelihoods.

Beştepeler Pumping Station is not located on private land with any formal or informal users. There is a cemetery on parcel 11216/76 within the impact area. To prevent the cemetery from being affected by construction activities:

- Temporary protective fences or barriers will be erected around the cemetery to physically separate it from the construction area. This will prevent physical damage to the cemetery.
- Dust suppression methods, such as water spraying, will be used to prevent dust generated during construction from spreading to the cemetery area. Additionally, a careful waste management plan will be implemented to prevent construction debris from entering the cemetery area.
- Appropriate signage and markings will be put in place to ensure that construction crews and vehicles do not accidentally enter the cemetery area. The boundaries of the construction area will be clearly marked.
- Construction activities will be halted or minimized during the hours when the cemetery is open to visitors to prevent disturbance to the visitors.
- To preserve the structural integrity of the cemetery, more precise and controlled excavation techniques should be used in areas close to the cemetery.

There are residential areas around the area where the construction activity will be realized. All areas where construction will be carried out belong to KASKİ. There is no private land. Relevant mitigation measures for settlements located near the Talas, Konaklar and İldem Reservoirs areas:

- To minimize noise during construction, low noise level equipment will be used.
- Noise barriers or temporary walls providing sound insulation will be constructed.
- Work that will create noise will be attempted outside school hours.
- The construction area will be surrounded by security fences to prevent unauthorized entry.
- Entrance and exit to the construction site will be made in a controlled manner.
- Safe passageways will be provided for students and staff.
- School management and parents will be regularly informed about the project process and possible impacts.



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## **Cultural Heritage**

Since there are no tangible cultural heritage assets near the Project area, no impact is expected on the existing cultural assets. If any chance find is encountered during the construction activities of the Project, the Chance Find Procedure will be implemented which is presented in Annex-9 and Contractor will inform immediately PIU and ILBANK of the historical and cultural findings, if any, as well as the actions taken. Construction will not proceed with until all requirements of the Turkish legislation and WB requirements are met.

### **4.3 Occupational Health and Safety**

The construction phase of the Project includes installation of equipment and use of task vehicles. According to the WBG Sectoral EHS Guidelines on Water and Sanitation, working in sanitation facilities is often physically demanding and may involve hazards such as the presence of open water channels, trenches, slippery walkways, working at height, open electrical circuits and heavy equipment. The nature of the work may also involve entering confined spaces. Maintenance and repair work is considered as construction work. Therefore, maintenance and repair teams will perform their work with construction phase impacts in mind and will always comply with relevant mitigation measures.



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## 5 RISK AND IMPACTS, MITIGATION, MONITORING

Within the scope of the Project, it is envisaged that some the environmental and social impacts in the pre-construction, land preparation and construction, and operation stages possible to arise.

The management of the risks and impacts that may occur on the environmental and social components during the pre-construction, land preparation and construction, and operation phases and the relevant mitigation measures defined for these impacts are given in the Table 5-1.

For the implementation of the mitigation plans, it should be noted that the most stringent among national legislation and WB standards will be complied with and also the most up-to-date legislation will be considered. GIIPs and WBG General and Sector specific EHSGs will be followed. In addition, the Contractor shall prepare the C\_ESMP in which it shall specify how it will implement the measures set out herein in a more specific manner.

Monitoring plays a key role in ensuring the continuity and effectiveness of the implementation of the identified mitigation management strategies. The main purpose of the Monitoring Plan is to provide a basis for assessing the implementation of the prescribed measures and requirements of this ESMP. Information gathered by monitoring can be used to improve management plans at all phases of the Project. Although impact assessment attempts to cover all relevant potential impacts to determine their significance and to include appropriate responses for these impacts, unexpected impacts may occur that can be managed or mitigated before they become a problem using information obtained through monitoring. Therefore, monitoring will ensure the successful implementation of mitigation/management plans and optimize environmental protection through good practices at each stage of the Project.

For the implementation of the monitoring plans, it should be noted that the most stringent among national legislation and WB standards will be complied and also the most up-to-date legislation will be considered.



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Table 5-1 Impacts, Mitigation Measures and Monitoring Matrix

Anticipated E&S Risks and Impacts	Proposed Risk Mitigation and Management Measures	Phase			Indicators for Monitoring	Frequency of Monitoring			Responsibility for Implementation and Monitoring
		Planning	Construction	Operation		Continuous	Monthly	Quarterly	
<b>Cultural Heritage</b>									
Damages to cultural heritage	In case of a chance find, all activities will be stopped and chance finds procedure presented in Annex-9 will be followed.		X		Visual observations Random Site Inspections ESMR Findings	X			Contractor
<b>Traffic and Transport</b>									
Disturbance due to the road closure, traffic jam due to the construction vehicles, etc	<ul style="list-style-type: none"> <li>All vehicles to be used in transportation activities will obey the speed limits set out in the Regulation on Highway Traffic;</li> <li>Safe driving by Project personnel will be ensured through trainings.</li> <li>Construction materials, equipment and machinery will not be stored in traffic lanes.</li> <li>If possible, traffic activities will be planned to avoid rush hour on local roads.</li> <li>The appropriate signage will be determined based on the Regulations on Traffic Signs.</li> <li>Alternative routes will be determined, and transportation will be programmed according to intensity of traffic. Traffic Management Plan will be prepared and implemented by the construction contractor.</li> </ul>		X		Visual observations Random Site Inspections ESMR Findings	X			Contractor
<b>Labor Force and Influx</b>									
Improper Working Conditions	<ul style="list-style-type: none"> <li>Workers will be provided with written contracts containing documented information that is clear and understandable, regarding their job description, working hours, wage and their rights under national labor law; including collective agreements, their rights related to hours of work, wages, overtime, compensation, and benefits as of startup of working relationship and when any material changes occur.</li> <li>The contractor is required to prepare their own Labor Management Plan before the start of civil works by adopting it with national Labor Law, MSIP LMP, WBG EHS Guidelines specifications and its specific Code of</li> </ul>	X	X		Visual observations Random Site Inspections ESMR Findings	X			Contractor  KASKI



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	<p>Conduct and in the line with ESMP. Labor Management Plan, on which the employees will be trained, will include working hours, workforce management, health and safety measures and rules to be implemented in the workplaces.</p> <ul style="list-style-type: none"> <li>A workers' grievance mechanism (WGM) will be provided to raise workplace concerns. The workers will be informed about the WGM at the time of recruitment, and it will be made easily accessible to them.</li> </ul>								
Workers Engaged by Third Parties and the Supply Chain	<ul style="list-style-type: none"> <li>Subcontractors will be reputable and legitimate enterprises and have an appropriate Environmental and Social Management System (ESMS) that will allow them to operate in a manner consistent with the labor conditions requirements;</li> </ul>	X	X		Visual observations Random Site Inspections ESMR Findings	X		Contractor	
Child labor, forced labor and unregistered employment	<ul style="list-style-type: none"> <li>Unregistered employment, child labor and forced labor will be prevented. In case of subcontracting of the construction activities, the Contractor will establish procedures for managing and monitoring the performance of subcontractors in relation to the prohibition of child labor, unregistered employment and forced labor. The Contractor will require such subcontractors to include requirements related to these issues and non-compliance remedies in their contractual agreements.</li> </ul>	X	X		Visual observations Random Site Inspections ESMR Findings	X		Contractor	
<b>Occupational Health and Safety</b>									
Inadequate workers health and safety conditions	<ul style="list-style-type: none"> <li>If workers are accommodated on site require them to minimize contact with people outside the construction/refurbishment site.</li> <li>Temperatures of workers and other people entering the site will be checked and recorded or require self-reporting prior to or on entering.</li> <li>Smoking will be prohibited where the risk of fire is high. All the workers will be informed about the action plan, to be prepared by the Contractors, in a case of fire.</li> <li>All equipment will be operated in proper working order. Also regular checks will be made and records will be kept.</li> <li>In the trench excavation areas performed by excavators, bulldozers and similar machines, no one will be present within the movement area of these machines, and only authorized personnel will operate these machines.</li> <li>The necessary health and safety signs and traffic signs will be placed around the project site. Employees will be informed and alerted about the subject matter markings.</li> </ul>	X	X		Incident Records Number of nonconformities Training records Work Permits ESMR Findings H&S reports H&S meetings Emergency drills	X		Contractor and/or sub-contractor  KASKI  Supervision Consultant	



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<ul style="list-style-type: none"><li>• Equipment that meets international standards in terms of performance and safety will be used at the construction sites.</li><li>• Railings or rigid barriers will be installed around all tanks, pits and excavation trenches.</li><li>• Sufficient number of personal gas detection equipment will be provided for the employees.</li><li>• Relevant procedures such as confined space entry, working at height, working in confined spaces, in trench etc. will be prepared in accordance with applicable national requirements and internationally accepted standards.</li><li>• The site-specific OHS Management Plan and related procedures prepared based on the construction site OHS risk assessment during the pre-construction phase will be implemented by the contractor, and compliance with this plan will be monitored and reported by the supervisor.</li><li>• Provision of appropriate PPE to the workers will be ensured at all times.</li><li>• OHS trainings and toolbox talks will be provided to the employees including the code of conduct indicating the possible risks regarding the work site and works to be carried out. These will include regular trainings to workers on regional and global pandemic symptoms, how to be protected and what to do when symptoms appear.</li><li>• Assigned full-time OHS specialist with relevant certification and experience will daily inspect the site and if any additional risk is observed relevant plans and trainings will be renewed. OHS non-conformities in the field will be periodically reported to KASKİ PMU.</li><li>• In the event of any significant incident (e.g. environmental, social, labor or lost-time incidents) the Contractor shall immediately notify Kayseri Municipality and the Municipality shall inform ILBANK and WB within no later than 24 hours.. Then, within 15 days, a report on the root causes of the incident and the corrective actions to be taken will be presented to ILBANK and WB.</li><li>• Both trainings and incidents (fatalities, lost time incidents, any significant events including spills, fire, outbreak of pandemic or communicable diseases, social unrest, etc.) will be recorded.</li><li>• Compliance of all activities with all relevant regulations of OHS Law No. 6331 and World Bank EHS Guidelines will be ensured at all times.</li><li>• Before the construction works start, an OHS Risk Assessment study will be implemented for all works to be carried out. Relevant procedures and plans (including “Emergency Plans”) will be put in place. Both the Risk</li></ul>														
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	<p>assessment and Emergency Response Plans will take into consider the communicable disease risks, as relevant.</p> <ul style="list-style-type: none"> <li>• The workers will be required to self-monitor for possible symptoms (fever, cough) and to report to their supervisor if they have symptoms or are feeling unwell.</li> <li>• In case an epidemic/communicable disease risk, the Contractor can also implement a screening program in the workplace. Screening can include providing free testing to workers and other employees who are exhibiting symptoms of the disease or requiring employees returning from high-risk areas to stay home for a predetermined amount of time to ensure that disease symptoms do not develop.</li> <li>• Guidance, directives, and recommendations of Ministry of Health, Ministry of Labor and Social Security, and World Health Organization shall be followed, and all relevant necessary measures shall be taken, both for occupational health and safety of employees and for workplaces, in case of an outbreak of any other pandemic/communicable disease.</li> <li>• Necessary training will be given to the personnel before the recruitment process which will be also refreshed during the work period. Trainings will cover OHS risks and mitigation measures, workers' rights, contract requirements, Code of Conduct, grievance redress mechanism and contact channels. Compliance with the rules of code of conduct, including gender-based violence, sexual harassment, sexual exploitation and abuse, which are included in the trainings to be provided, will be in the contract articles of the personnel. The sanctions for non-compliance with the code of conduct will be clearly stated in the contract.</li> <li>• Security Management Plan will be prepared and implemented by the Contractor, and communicated to all workers/personnel, a training on soil management will be given to related workers.</li> </ul>								
<p>Uncertainty of Emergency Response Methods</p>	<ul style="list-style-type: none"> <li>• The issues related to Emergency Preparedness and Response stated in this Plan will be complied with in accordance with the national and international standards.</li> <li>• All accommodation areas will have adequate emergency response equipment such as smoke detectors, alarm systems, first aid kits and firefighting equipment.</li> <li>• Appropriate emergency response equipment will be available at various locations at the construction site Sufficient number of personnel with a valid first aid certificate will be employed, taking into account the different working locations and working shifts.</li> </ul>	X	X		<p>Visual observations                      Random Site Inspections                      ESMR Findings                      Incident Records                      Number of nonconformities                      Training records                      H&amp;S reports                      H&amp;S meetings                      ESMR Findings                      Documentation Check</p>	X			<p>Contractor</p>





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	<ul style="list-style-type: none"> <li>Absorbent materials, fire extinguishing equipment, etc., in order to be able to respond immediately in case of any emergency such as spillage and fire will be available in close proximity to the construction area.</li> <li>Periodic visual checks will be made in hazardous waste storage areas, and possible spills/leaks will be detected quickly. Drills will be conducted regularly in different scenarios in hazardous waste storage areas and chemical waste areas to be prepared for such events.</li> </ul>				(Drill records, EPR documents)				
<b>Community Health</b>									
Inadequate Safety Conditions for Community	<ul style="list-style-type: none"> <li>The access of local people to the construction sites will be fencing, blocked with barriers, phosphorescent or illuminated warning signs so that the work does not cause harm to people living in the area (especially children, the elderly, the disabled). The entry of personnel and third parties into the facility will be carried out in a controlled manner under the supervision of a security guard. A 24/7 security guard will be employed in the areas. Especially the areas where excavation work is to be carried out will not be accessible other than the authorized personnel. If a trench needed to be left open for night, the sufficient illumination of the area shall be ensured by the Contractor and necessary signs shall be placed, and the area shall be enclosed with rigid barriers.</li> <li>Traffic trainings will be given to students by contacting the administrations of the schools located within 500 m of the roads.</li> </ul>		X		ESMR Findings Visual observations Random Site Inspections Incident Records	X			Contractor
Increase in Health Problems	<ul style="list-style-type: none"> <li>Training of all staff on health and general hygiene and cleaning will be provided.</li> <li>In order to eliminate or minimize the health problems may arise among workers and local people, the excavation materials will be stored in the area to be determined by the Municipality after the necessary hygiene measures are taken.</li> <li>Before commissioning, components such as pipes, valves, fire hydrants, etc. will be cleaned and disinfected.</li> <li>The ends of the installed pipes will be closed to prevent any contamination before commissioning.</li> <li>Asbestos-containing waste will be transported and disposed of in accordance with Regulation on the Road Transportation of Hazardous Goods by signing a contract with a waste transport company licensed by the Ministry of Environment, Urbanization and Climate Change and an authorized waste disposal organization.</li> </ul>	X	X		Number of nonconformities Training records H&S reports H&S meetings ESMR Findings Documentation Check (Disease follow-up record, training records and Drinking Water Quality Analysis)	X			Contractor



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	<ul style="list-style-type: none"> <li>Water quality analysis will be performed in case of contamination in the existing water network system in line with the national and international standards. If a contamination is proved to be occurred, necessary precautions will be taken immediately such as ensuring the continuity of water pressure throughout the network at a level that will prevent stagnation and backflows and using more stable secondary disinfectants.</li> <li>Whenever a new pipe is laid, a part of the water distribution system is expanded, or a part of the water distribution system or a pipe is replaced, pressure tests will be performed, and the distribution pipes should be disinfected.</li> </ul>								
Possible Asbestos Pipe Removal	<ul style="list-style-type: none"> <li>If any asbestos pipe is encountered by the Contractor during the excavations, it will not be removed to the surface.</li> <li>An Individual Asbestos Management Plan will be prepared and implemented by the Contractor.</li> <li>In cases where asbestos pipes need to be brought to the surface, the principles of the Regulation on Health and Safety Precautions in Working with Asbestos will be followed. The work should be carried out by an asbestos removal specialist, who has a vocational training certificate.</li> <li>In case of encountering asbestos in the project area, it will be clearly identified as hazardous substance.</li> <li>Where asbestos removal is required, wetting agent will be used to keep asbestos dust to a minimum before dismantling.</li> <li>Where asbestos required to be stored temporarily, this hazardous waste will be kept in securely closed containers and appropriately labelled.</li> <li>Removed asbestos will not be reused. For the asbestos-containing wastes, licensed transportation and disposal companies/facilities will be searched by the Contractor near the Project area, and disposal of those asbestos-containing wastes will be transferred there in accordance with the provisions of the Waste Management Regulation. Necessary protocols and/or contracts will be signed with the licensed company in case of asbestos pipe removal.</li> <li>Regarding the works including a risk of exposure to asbestos dust, a risk assessment will be made by considering the type and physical properties of asbestos and the degree of exposure of workers. Also a special training program covering rules for safe working with asbestos will be applied to the work force which has a possibility to encounter asbestos containing pipes.</li> </ul>	X			Training records Work Permits H&S reports ESMR Findings	X			Contractor



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	<ul style="list-style-type: none"> <li>Necessary markings for asbestos will be posted at the work area and warning signs will be placed.</li> <li>Worker health screenings before and after the Project construction period will include diagnoses of possible lung and respiratory diseases that may result from asbestos exposure. The details of the health examinations will be decided by the workplace physician.</li> <li>Appropriate respiratory protection and other personal protective equipment will be used. Working and exposure time will be recorded. Records are retained for at least 40 years after exposure to asbestos dust has ceased.</li> </ul>								
Gender Based Violence (GBV), Sexual Exploitation Abuse / Sexual Harassment (SEA/SH)	<ul style="list-style-type: none"> <li>Provide trainings to management of the construction contractor on GBV and SEA/SH issues .</li> <li>Awareness Meetings will be conducted with the affected communities.</li> <li>Trainings regarding GBV and SEA/SH will be provided to all Project workers.</li> <li>All Project workers will sign and be informed about the Code of Conduct.</li> <li>A functional GRM and referral mechanism will be operated to capture GBV and SEA/SH related complaints.</li> <li>Separate facilities for men and women in the workers' camps (if needed) will be provided.</li> </ul>	X	X	X	GBV and SEA/SH Grievance Records ESMR Findings	X		Contractor	
<b>Stakeholder Engagement</b>									
Communication issues with the stakeholders	<ul style="list-style-type: none"> <li>A Grievance Mechanism is established for the public/stakeholders and integrated into the existing complaint system and its orientation will be ensured about its proper functioning including confidentiality in case of GBV and SEA/SH related.</li> <li>Establishment of regular stakeholder engagement activities, such as Town Halls, focus group discussions, membership in local groups/committees involved in project implementation – from pre-construction to completion.</li> <li>Disclosure of ESMP and other relevant project documents and information on various communication platforms</li> <li>The ESMP and other relevant project documents and information will be disclosed to project employees including contractors, project stakeholders and public.</li> <li>In case of traffic route changes, drinking water interruption, etc. the public will be informed in advance.</li> <li>Information materials (brochures, brochures, etc.) will be prepared.</li> </ul>	X	X	X	Enquiries/ questions/ grievances by stakeholders Minutes of Meetings Grievance Records (number and nature of grievances & percentage of closed grievances)	X		KASKI Contractor	



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	<ul style="list-style-type: none"> <li>Platforms/meetings will be organized for information disclosure and consultation.</li> <li>There will be regular consultations with local authorities and communities regarding the management of the construction.</li> <li>Establishment and proper functioning of a grievance redress mechanism will be ensured and information about it disseminated to the public.</li> <li>It will be ensured that the concerns of all stakeholders are addressed.</li> <li>Stakeholder engagement events will be preceded with the procedure of articulating hygienic practices.</li> <li>All details of the Gender-Based Violence (GBV) and Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH) survivors will be kept strictly confidential in the Grievance Register Database.</li> </ul>								
<b>Land Use, Soil and Geology</b>									
Topsoil loss, Physical Deterioration	<ul style="list-style-type: none"> <li>Public roads and streets will be backfilled, and road cover will be recovered by the Contractor.</li> <li>Amount of soil that could be subject to compaction will be minimized by ensuring the use of only the designated worksites and routes for the construction machinery and equipment and field personnel.</li> <li>To avoid soil compaction, stripping operation will not be done when soil is wet. Average height of topsoil stacks will be 2 meters. Side slope of these stacks will not exceed 3:1.</li> <li>The designated worksites and routes will be minimized and only these areas will be used to avoid soil compaction.</li> <li>The provisions of the Regulation on Control of Excavation Soil, Construction and Demolition Wastes shall be complied during land preparation and construction phase of the Project.</li> <li>Excess excavation material will be re-used as appropriate or disposed of in existing licensed excavation waste storage sites.</li> <li>Soil Management Plan will be prepared and implemented by the Contractor, and communicated to all workers/personnel, a training on soil management will be given to related workers.</li> </ul>	X	X		<p>The number of events that trigger spill and leakage response</p> <p>Environmental spill/leak incident records/report</p> <p>ESMR findings</p> <p>Amount of topsoil removed/stripped which will not be used in landscaping activities and stored at the determined storage area will be estimated and the data will be recorded in a Project-specific Document Control System</p>	X			Contractor
Soil contamination	<ul style="list-style-type: none"> <li>Amount of soil that could be subject to contamination will be minimized by ensuring the use of only the designated worksites and routes for the construction machinery and equipment and field personnel.</li> <li>Machinery and equipment will be checked regularly for leaking oil and fuel.</li> </ul>	X	X		<p>The number of events that trigger spill and leakage response</p> <p>Environmental spill/leak incident records/report</p> <p>ESMR findings</p>	X			



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	<ul style="list-style-type: none"> <li>In an event of an accident, leak or spill, necessary repair works and/or replacement of parts will be performed promptly.</li> <li>Spill kits, absorbent pads and absorbent sands will be available on Project construction sites continuously.</li> <li>The fuel required for the construction equipment and vehicles to be used within the site during the construction phase will be supplied primarily from the nearest station; if deemed necessary, fuels that may be stored at the site will be stored in the areas where necessary impermeability precautions (including secondary containment) are taken.</li> <li>Provisions of the Regulation on the Control of Soil Pollution and Sites Contaminated by Point Sources will be complied.</li> <li>Wastes and wastewater (rainfall filled in trenches) to be generated during the land preparation and construction phases of the Project will be stored and disposed of in a controlled manner in accordance with the relevant regulations defined in <b>Hata! Başvuru kaynağı bulunamadı.</b> and in line with the management practices described in this report.</li> </ul>				Environmental incident registry				
<b>Natural Disasters</b>									
Erosion potential	<ul style="list-style-type: none"> <li>Construction activities (especially excavation works) will be undertaken in dry weather condition as much as possible.</li> <li>Stripping of topsoil will not be conducted earlier than required to prevent the erosion of soil (wind and water);</li> <li>Limit circulation of heavy machinery to minimal areas.</li> <li>Works will be planned in a way to avoid opening up new parts before closing the parts completed as much as possible.</li> <li>The disturbed areas and soil stockpiles will be kept moist to avoid wind erosion of soil and stockpile height of topsoil does not exceed 2m maximum;</li> <li>The potential impact of surface runoff will be minimized by establishing proper drainage systems.</li> <li>Topography will be restored for stop stabilization immediately after the completion of construction at each location.</li> </ul>	X	X	X	Visual observations ESMR findings	X			Contractor
Structural Damage Buildings to	<ul style="list-style-type: none"> <li>The project area is located in the 1st degree earthquake zone according to the Earthquake Risk Map of Türkiye. In the structures to be constructed within the scope of the project, provisions of "Regulation on the Structures to be Built in Natural Disaster Areas", "Regulation on Building Constructions in Earthquake Zones" and "Regulation on Building</li> </ul>	X	X	X	Visual observations ESMR findings	X			Contractor



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	Earthquake of Türkiye” and Disaster and Emergency Management Presidency will be strictly followed.							
Rockfall and Flood Potential	<ul style="list-style-type: none"> <li>Potential rockfalls will be detected and fixed or hinged connection barriers will be used in high potential areas.</li> <li>Meteorological forecasts will be followed to allow sufficient time to evacuate and prepare the project area before the onset of heavy rainfall and flooding.</li> <li>Construction equipment (or excess material) will be removed from low-lying areas, especially around stream areas.</li> </ul>	X	X	X	Visual observations ESMR findings	X		Contractor
<b>Water Resources</b>								
Impacts on Water Resources	<ul style="list-style-type: none"> <li>Discharge of wastewater, residues or other waste into groundwater or into surface water will be avoided. Portable toilets will be supplied for the workers at the construction sites. The wastewater generated in the construction sites will be connected to the existing sewage network or where the connection is not possible it will be collected into the impervious septic tanks and then discharged into the nearest sewage network by vacuum trucks, or it will be transferred to Kayseri Wastewater Pre-treatment Plant.</li> <li>The water to be used for dust suppression will be followed in m<sup>3</sup>.</li> <li>Surface runoff due to dust suppression activities will be prevented.</li> <li>The wastewater arising from cleaning or washing vehicles and construction equipment will be collected in tanks and disposed of via the septic trucks.</li> <li>In case the excavated trenches are filled with surface water, groundwater or rainfall, the muddy water accumulated in these channels will be drained with the help of the municipal vacuum truck. The discharged sludge will be collected in watertight septic tanks and will not be discharged to the receiving environment. It will be transferred to the nearest stormwater channel to be treated in the nearest wastewater treatment plant (for more information see Section 4.4).</li> <li>Spill kits will always be available on the construction sites.</li> <li>The discharges resulting from the hydro testing and pressure testing will not be directly discharged to the environment. These will be collected in impermeable containers and will be disposed by transporting to the nearest WWTP or to an active sewer network.</li> </ul>	X	X		Visual observations Related grievance records Sampling and Analysis ESMR findings	X		Contractor



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Decrease in surface water quality	<ul style="list-style-type: none"> <li>Surface runoff due to watering for dust suppression activities will be prevented.</li> <li>Any spill/leak of hazardous materials into the irrigation channel with seasonal / continuous flowing streams where the project routes intersect will be taken under control immediately and surface waters will be protected against pollution.</li> </ul>				Visual observations Related grievance records Sampling and Analysis ESMR findings Water Quality Analysis (if needed)	X			Contractor
Decrease in groundwater quality and level	<ul style="list-style-type: none"> <li>When determining the locations of temporary fuel or oil storage areas, the locations of water resources will be taken into consideration and dangerous material spills / leaks such as fuel, oil, oil, cement etc. will be taken under control immediately.</li> <li>In case of detection of Project-related pollution in groundwater, the Measures Program specified in Section 3 of the Regulation on The Protection of Groundwater against Pollution and Determination will be applied.</li> </ul>				Visual observations Related grievance records Sampling and Analysis ESMR findings Water Quality Analysis (if needed)	X			Contractor
<b>Waste and Wastewater</b>									
Impacts on the Environment and Human Health	<ul style="list-style-type: none"> <li>Requirements of applicable waste management regulations will be complied with for the management of all wastes generated as a result of project activities.</li> <li>Waste will be separated (i.e., hazardous / non-hazardous, recyclable / non-recyclable) and stored in designated temporary storage areas.</li> <li>All types of waste shall be transferred to a licensed disposal facility via licensed waste transportation companies following the relevant legislation.</li> <li>Some amount of hazardous or special wastes likely to be generated (e.g. filters and protective clothes, rags, packages contaminated with chemical substances such as paint/solvent or oils) within the scope of the Project will be stored in special compartments in the Temporary Storage Area allocated for this purpose, in containers, separated from the non-hazardous wastes. This area be ensured that the waste storage areas comply with the standards defined in Section 4.1, under the topic of Waste. All types of waste shall be transferred to a licensed disposal facility via licensed waste transportation companies following the relevant legislation. Spill kits will be available at the Temporary Storage Area and necessary precautions will be taken against possible fires such as provision of appropriate firefighting equipment.</li> <li>Impermeability will be provided on the floors of the storage areas against possible contamination of soil and groundwater. Besides, a suitable</li> </ul>	X	X		Visual observations Waste segregation practices Waste Disposal Agreements and Records Waste Grievance Records ESMR Findings Visual Observation regarding proper collection and temporary storage of wastes	X			Contractor





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	<p>drainage system will be installed against leaks. A roof will be placed at this area to avoid contact with rain, snow, etc.</p> <ul style="list-style-type: none"> <li>Physical access to the waste storage areas will be restricted, and only authorized persons will be allowed to enter the storage areas.</li> <li>Warning signs and boards with the name and contact number of the authorized personnel will be placed in the storage areas.</li> <li>Except for the areas reserved for this purpose, it will be ensured that wastes are not spilled and all necessary waste management trainings will be given periodically.</li> <li>No waste should be disposed of or incinerated at the construction site. Adequate waste disposal facilities (separate waste containers at the construction sites) will be provided. Collection of all solid waste from generation points and safe transportation to a collection point will be ensured.</li> <li>Incineration or burying of waste by any means and/or dumping to nearby water sources will not be allowed.</li> <li>All kinds of works that may threaten personnel or public health will be avoided in all activities including the collection, temporary storage, transportation, and disposal of wastes throughout the project.</li> <li>Awareness should be created by training employees on waste management practices such as zero waste.</li> <li>Principle of "reduction at the source" will be interiorized.</li> </ul>								
Excavation Waste Generation	<ul style="list-style-type: none"> <li>Excavation wastes, which are formed as a result of the trench excavations should be classified (as asphalt, curbs, parquet, concrete and soil), and recovered, re-evaluated, and re-use opportunities in the construction site must be considered.</li> <li>Excavation that will not be used for filling operations will be kept in temporary storage containers. Temporary storage containers will be yellow colored, and type of the waste materials will be indicated on the containers. Domestic and hazardous wastes will not be disposed in these temporary containers. The containers filled with excavation waste will be disposed of in consultation with the Kayseri Municipality. They will be sent to the excavation waste storage areas designated for the excavation material by Kayseri Municipality. The transportation of such wastes will be provided by licensed transport vehicles.</li> </ul>	X	X		<p>Visual observations          Excavation amount          Waste Disposal Agreements and Records          Waste Grievance Records          ESMR Findings          Visual Observation regarding proper collection and temporary storage of wastes</p>	X			Contractor



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	<ul style="list-style-type: none"> <li>Excavation works will comply with the provisions of the Regulation on Control of Excavated Soil, Construction and Demolition Wastes.</li> </ul>							
Domestic Wastewater Generation	<ul style="list-style-type: none"> <li>The domestic wastewater generated at construction sites will be properly connected to the existing wastewater network. Portable toilets will be supplied for the workers at the construction sites. Where the connection to the existing sewage network is not possible, the wastewater generated in the construction sites will be collected in the septic tanks and discharged into the nearest sewage network by the vacuum trucks, or it will be transferred to Kayseri Wastewater Pre-treatment Plant.</li> <li>In case of need, the septic tank will be made of concrete material to provide impermeability. If ready-made septic tanks are used, basement impermeability will be ensured.</li> </ul>	X	X		<ul style="list-style-type: none"> <li>Wastewater connection agreements</li> <li>Wastewater grievance records</li> <li>ESMR findings</li> <li>Visual Observation regarding proper collection and temporary storage of wastes</li> </ul>	X		Contractor
Non-hazardous Waste Generation	<ul style="list-style-type: none"> <li>Wastes to be generated within the scope of the Project will be managed in accordance with the waste management hierarchy.</li> <li>Hazardous or non-hazardous inscription, waste code, stored waste amount and storage date will be indicated/labelled on wastes temporary stored by classifying according to their properties. The reaction of wastes with each other will be prevented by the measures taken in the Temporary Storage Area.</li> <li>Domestic solid wastes generated on work sites will be stored in containers and collected daily by the Kayseri Municipality.</li> <li>Adequate waste disposal facilities will be provided. Collection of all solid waste from generation points and safe transportation to a collection point will be ensured.</li> <li>Packaging materials (such as sacks, pallets, parcels, plastic coatings) from the products used at the head office and work sites shall be collected separately according to the provisions of the "Regulations for Control of Packaging and Packaging Wastes".</li> <li>Incineration or burying of wastes by any means at site and/or dumping of wastes to nearby roads or water resources will not be in question.</li> <li>Employees will be trained on waste management practices.</li> </ul>	X	X		<ul style="list-style-type: none"> <li>Visual observations</li> <li>Waste Disposal Agreements and Records</li> <li>Waste Grievance Records</li> <li>ESMR Findings</li> <li>Visual Observation regarding proper collection and temporary storage of wastes</li> </ul>	X		Contractor
Hazardous Waste Generation	<ul style="list-style-type: none"> <li>Waste oils originating from machinery and vehicles will be stored in impervious tanks and containers that would be situated on impervious base in accordance with the "Regulation on Control of Waste Oils". Tanks and containers will be equipped with apparatus that would prevent over</li> </ul>				<ul style="list-style-type: none"> <li>Waste segregation practices (amount of waste per type)</li> <li>Visual observations (at temporary waste storage area on site)</li> </ul>			Contractor



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	<p>filling and will be filled till the designated level mark. Tanks and containers will have a red colour and must be labelled as "waste oil".</p> <ul style="list-style-type: none"> <li>• Used batteries from construction site and accumulators from vehicles will be disposed in compliance with the consumer responsibilities specified in Article 13 of the "Regulation on Control of Used Batteries and Accumulators". Accordingly, used batteries will be collected separately (from municipal wastes) and transferred to the designated collection sites (for example, the collection site owned by Union of Transportable Battery Manufacturers (TAP)), if there is one in the region.</li> <li>• Hazardous wastes to be temporarily stored on site will be delivered by licensed transport vehicles appropriate to the type of waste for disposal. Information related to the operations in this context will be recorded.</li> <li>• All other hazardous materials will be disposed of in accordance with the Waste Management Regulation.</li> <li>• Hazardous or non-hazardous inscription, waste code, stored waste amount and storage date will be indicated/labelled on wastes temporary stored by classifying according to their properties. The reaction of wastes with each other will be prevented.</li> <li>• Hazardous wastes will be stored at the construction site away from buildings in impermeable and safe containers placed on concrete ground that are produced according to the Waste Management Regulation.</li> </ul>				<p>Waste Disposal Agreements and Records          Waste Grievance Records          ESMR Findings          Visual Observation regarding proper collection and temporary storage of wastes</p>					
<b>Air Quality</b>										
<p>Dust and Particulate Matter Generation</p>	<ul style="list-style-type: none"> <li>• The impact of the dust formed during the construction phase will be mitigated by watering the network routes and roadside embankment, regulating the time intervals of the works, controlling the vehicle speeds and covering the tops of the transportation vehicles with tarpaulin.</li> <li>• The top of the excavated material will be wetted to prevent dust formation.</li> <li>• Loading/unloading will be carried out carefully without scattering.</li> <li>• Wind shield and barriers will be used in the working area depending on wind conditions.</li> <li>• Trucks hauling excavation material will be covered, the material will be prevented from scattering during transportation, and the roads will be cleaned quickly if the material is scattered.</li> <li>• Care will be taken during filling and unloading of the material.</li> <li>• The route to be used in the transport of the excavation material/waste will be carefully selected and care will be taken not to pass through the densely populated areas.</li> </ul>	X	X	X	<p>Air pollution grievance records          Air Quality Measurement (if available)          ESMR findings          Documentation Check (Grievance Registration)          Visual Observation (based on the irritation in the respiratory system)          Air Quality Measurement (by an authorized environmental laboratory)</p>	X			Contractor	



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	<ul style="list-style-type: none"> <li>Care will be taken to enforce speed limits for transport vehicles. Accordingly, the speed limit will not exceed 30 km/h on roads with a poor coating.</li> <li>In order to prevent the effect on the air quality from affecting the working and resting activities, the construction activities will be carried out at the determined time of period, and this determined time interval will be announced beforehand to the residents who will be affected by the construction activities through the means of communication tools of Kayseri Municipality and Contractors/Subcontractors.</li> <li>Compliance with the air emission limit values stipulated in national legislation and WBG General EHS Guidelines will be ensured.</li> <li>Dust measurements will be conducted if any grievance regarding dust generation is received and mitigation measures will be enhanced in this respect such as increasing wet suppression/watering activities, further reducing speed/traffic, etc., if deemed necessary, considering both national and WBG EHS Guidelines limit values.</li> </ul>				With Automatic Gas Detection and Alarm Equipment				
Exhaust Emissions	<ul style="list-style-type: none"> <li>In accordance with the “Exhaust Gas Emission Control Regulation”; vehicles with traffic inspections, exhaust gas emission measurements will be used, and vehicles that need maintenance will be taken into maintenance after routine checks and other vehicles will be used until their maintenance is completed.</li> <li>Each vehicle to be used for transport during the construction phase shall have the “Motor Vehicle Exhaust Emission Measurement Stamp”. The measurement stamp will be renewed every year by measuring exhaust gas.</li> <li>Routine inspection and maintenance of the vehicles used for transportation will be performed (daily and periodically). Maintenance forms will be filled regularly.</li> <li>Use of fuel conforming to standards will be ensured.</li> </ul>	X	X	X	Air pollution grievance records Vehicle exhaust measurements Maintenance forms ESMR findings	X		Contractor	
<b>Noise</b>									
Increase in Noise Level	<ul style="list-style-type: none"> <li>In this direction, the activities to be carried out in and around the residential areas will not be carried out in the evening and night-time periods, but during the daytime period.</li> <li>To prevent the effect of the noise from affecting the working and resting activities, the construction activities will be carried out at the determined hours and in a way that does not exceed limit values stipulated in national</li> </ul>	X	X		Noise level measurement results (if available) Construction machinery and equipment maintenance log Noise grievance records ESMR findings	X		Contractor	



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	<p>legislation (Regulation on Environmental Noise Control) and WBG EHS Guidelines.</p> <ul style="list-style-type: none"> <li>• An attention will be given to the selection of equipment with low noise level,</li> <li>• In places where these limit values are exceeded, sound barriers will be used around the work area. In this context, muffler or sound suppressor parts will be used in all kinds of motor vehicles.</li> <li>• Regular maintenance of equipment and vehicles to be used in excavation, construction, transportation, pipe placement and asphaltting phases will be carried out.</li> <li>• The maintenance of construction equipment will be carried out in accordance with the relevant regulations and manufacturer's recommendations.</li> <li>• All construction activities will be carried out in compliance with the noise limits set out in the Regulation on Environmental Noise Control and WBG EHS Guidelines and the contractor will take additional mitigation measures in case of a requirement revealed by the monitoring,</li> <li>• The machinery and equipment to be used during the land preparation and construction activities will not be operated at the same point/location but homogeneously distributed in the site.</li> <li>• The machinery, equipment and vehicles with lower sound power levels and sound reduced models will be preferred.</li> <li>• Noise measurements will be conducted if any grievance regarding noise is received and if measured levels are above previously mentioned limit values, mitigation measures will be enhanced in this respect such as use of noise barriers, limiting construction activities at certain times, selecting equipment with lower sound power levels, installing acoustic barriers/vibration isolation for mechanical equipment, limiting the hours of operation for specific pieces of equipment or operations, etc., if deemed necessary, considering both national and WBG EHS Guidelines limit values.</li> <li>• The nearby residents will be informed about the time of construction activities.</li> </ul>							
Vibration	<ul style="list-style-type: none"> <li>• Sensitive care will be taken in the selection of equipment and parts in accordance with the ground vibration velocity values of the Regulation on Environmental Noise Control.</li> <li>• In case of any complaints relevant to the selected vehicles and equipment generating vibrations above the expected level, measurement studies will</li> </ul>	X	X		Vibration level measurement results (if available) Construction machinery and equipment maintenance log	X		Contractor



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	be carried out and necessary corrective actions to prevent the transmission of vibration from the floor and side surfaces to the floor by using elastic mattress and steel construction will be taken if required.				Vibration grievance records ESMR findings				
<b>Biodiversity</b>									
Disturbance on flora and fauna species	<ul style="list-style-type: none"> <li>Project workers will not be allowed to bring any live animals or plants into the construction site to avoid the risk of pest/invasive species establishing in the Project Area.</li> <li>Construction work will be done gradually so that it will have enough time to escape for possible fauna species to be found;</li> <li>Activities will be minimized when seeds are available (e.g., avoid walking with long drawings, car washing, activities outside the working area).</li> <li>Efforts will be taken to mitigate or reduce impacts of disturbance.</li> <li>Where necessary, new structures will also be considered in areas determined to be important for animal migrations to ensure that there is no net loss of populations of fauna species.</li> </ul>	X	X		Visual observations ESMR Findings	X			Contractor
Habitat Loss	<ul style="list-style-type: none"> <li>Land preparation and construction activities will be limited to designated work areas.</li> <li>The Project personnel will be informed on the sensitivity of the habitats.</li> <li>Project-induced impacts on air, soil and water in natural habitats will be avoided.</li> </ul>	X	X		Visual observations ESMR Findings	X			Contractor
<b>Socio-Economic Environment</b>									
Impacts on Local Economy, Livelihood Sources and Employment	<ul style="list-style-type: none"> <li>The construction works on the streets where the tradesmen and shops are concentrated will be planned and organized to be completed as soon as possible in order not to cause any significant decrease in those tradesmen and shop staff's livelihoods. Project-affected people will be consulted, and signs will be posted explaining temporary closures, as necessary.</li> <li>Traffic safety management measures will be implemented.</li> <li>Local employment will be prioritized as much as possible for unskilled, semi-skilled and skilled works within the scope of Project.</li> </ul>	X	X	X	Socio-Economic Grievance Records ESMR Findings	X			KASKİ Contractor
Impacts on Infrastructure Status and Social Services	<ul style="list-style-type: none"> <li>The relevant permits, protocols will be granted for other third-party crossings such as underground electricity cables etc. during construction stage.</li> <li>A team/teams to accompany the excavation team will be provided from the related utility authority; and the construction activities will be performed in a way not to give any damage to the utilities located in the working area.</li> </ul>	X	X	X	Socio-Economic Grievance Records ESMR Findings Survey studies (if needed) Face-to-face meetings with affected business owners	X			KASKİ Contractor



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	<ul style="list-style-type: none"> <li>• Consultations and grievance redress mechanisms will be properly implemented to ensure minimum negative impact and maximum positive impact on the local economy.</li> <li>• In order to reduce the economic negative effects of short-term closures and route changes, alternative routes will be created, and these changes will be announced through local media and corporate announcements.</li> <li>• In the selection of the roads to be used during the construction phase, the understanding of not passing through the settlements and keeping the use of the ring roads at a minimum level will be adopted.</li> <li>• In order to eliminate or minimize the corrosive effect on the roads, relevant complaints will be taken into account and necessary maintenance and repair works will be carried out.</li> <li>• Compensation for damaged assets due to construction vehicles will be included in the scope of contracts.</li> <li>• In order to minimize the socio-economic impacts that may occur in the event that construction activities temporarily interrupt infrastructure services such as water, electricity and internet in a planned or unplanned manner, a planning that avoids interruptions as much as possible will be made.</li> </ul>								
<p>Impacts on Vulnerable/ Disadvantaged Individuals/ Groups</p>	<ul style="list-style-type: none"> <li>• Vulnerable /disadvantaged individuals/groups will not be at risk of being excluded from decision-making processes for activities that will benefit them or receiving socially inappropriate benefits or adversely affecting their livelihoods from project activities.</li> <li>• It will be ensured that vulnerable groups have a voice to shape the benefits they would like to see from the Project.</li> <li>• Equal participation of women in consultations and decision-making processes will be ensured.</li> <li>• An adequate communication framework will be established to ensure that vulnerable groups' voices are heard, pending issues are resolved and grievances heard.</li> <li>• The use of transportation roads to the neighborhoods where training on traffic safety is provided will be planned in a way that does not endanger the travel safety of the service vehicles.</li> <li>• Traffic precautions (warning signs, speed limits, settlement, and school information for the periods when large and dangerous loads will be transported) will be taken.</li> </ul>	X	X	X	<p>Socio-Economic Grievance Records ESMR Findings</p>	X			<p>KASKİ Contractor</p>



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	<ul style="list-style-type: none"> <li>• Special crossings will be developed by taking additional measures for the elderly, pregnant women, people with small children and disabilities.</li> <li>• Kayseri Municipality/Contractor will inform the relevant institutions and organizations (Municipality, Electricity Distribution Company, natural gas distribution and operating company) before the construction starts so that the usage habits of those living in these areas are not affected during the construction works.</li> <li>• Attention to the specific needs of vulnerable groups, such as targeted outreach, access to services, mobility and other support will be given.</li> <li>• The meeting hours will be organized in such a way that the female household member can also participate in the meeting, or if necessary, a separate meeting for females will be organized.</li> <li>• Additional brochures and other informative documents of the Project will be handed over to the mukhtars so that the mukhtars deliver those to the vulnerable/disadvantaged individuals.</li> </ul>								
<b>Climate Change</b>									
Greenhouse gas emissions	<ul style="list-style-type: none"> <li>• It will be ensured that the existing construction equipment and materials are used in an optimum way to reduce greenhouse gas emissions.</li> <li>• Speed restrictions will be implemented on construction vehicles and equipment to optimize fuel efficiency.</li> <li>• Regular maintenance of construction vehicles and equipment will be carried out.</li> <li>• Energy use related to construction vehicles and equipment will be monitored.</li> <li>• Trainings on energy efficiency will be given to the project personnel</li> </ul>	X	X	X	Construction machinery and equipment maintenance log Grievance Records ESMR Findings	X			Contractor





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## 6 ENVIRONMENTAL AND SOCIAL MANAGEMENT AND RESPONSIBILITIES

Kayseri Water and Sewerage Administration General Directorate (KASKİ) was established with the decision of the Council of Ministers dated 14/12/1989 and numbered 89/14886 to carry out the water and sewerage services of Kayseri Metropolitan Municipality and to establish all kinds of facilities required for this purpose, to take over the established ones and to operate them from one hand. KASKİ, whose service area is limited to Kayseri Metropolitan Municipality's neighborhood area, is also responsible for the protection of the water resources that are utilized by the city but outside the boundaries. KASKİ is a public legal entity with an independent budget, affiliated to Kayseri Metropolitan Municipality. KASKİ's personnel are subject to the provisions of the Civil Servants Law No. 657.

As the project owner, it is the responsibility of KASKİ to manage the environmental, OHS and social issues of the project and to ensure that the necessary mechanisms are developed and implemented by the Contractor.

The construction of the Project will be carried out by the construction company(ies) to which the tender will be awarded. KASKİ is the main responsible party for the compliance of the Project with the requirements including Environmental, Social, Health and Safety (ESHS) measures. The economic life of the project is determined as 40 years. During the 12-month defect liability period, the construction contractor will be responsible for any repair needs that may occur in the newly constructed facilities in accordance with the legal regulations as of the provisional acceptance. At the end of this period, KASKİ will be responsible for the operation, maintenance and repair of the entire system.

In order to ensure that KASKİ carries out works related to projects such as Water Supply Project in a way that minimizes potential impacts, it needs to have the resources to manage environmental and social issues, mitigate the impacts foreseen in the ESMP and then carry out the monitoring program.

With the Project Implementation Unit (PIU) established within KASKİ, the Contractor, which will be responsible for the execution of site preparation and construction works within the scope of the Project, will be able to manage environmental and social issues and natural resources within the scope of the ESMP, both by receiving consultancy within their own organizational structure and by receiving external consultancy.

The ESMP defines the roles and responsibilities of KASKİ and the contractor/subcontractors. KASKİ has committed to provide the necessary institutional capacity and resource allocation for the implementation of the relevant plans.

The organizational List of KASKİ PIU is given in Table 6-2

It is in the responsibility of KASKİ to manage the issues specified in the ESMP prepared for the sound execution of the project and to ensure that the necessary mechanisms are developed and implemented by the Contractor.

The roles and responsibilities of the relevant institutions which are involved in the management, monitoring, implementation and finalization of the Project are summarized in **Hata! Başvuru kaynağı bulunamadı.**

İLBANK Project Management Unit will include environmental, social and OHS specialists to supervise the implementation of the ESMP. The specialists will supervise the implementation of the ESMP by KASKİ and document performance, recommendations and any further actions required. They will provide guidance to KASKİ officials on World Bank procedures, consultation and disclosure requirements.



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Table 6-1 Institutional Roles and Responsibilities

Institution	Roles and Responsibilities
ILBANK PMU	<ul style="list-style-type: none"> <li>To fulfill the project implementation support role to ensure that the project is carried out in line with WB ESF,</li> <li>Visit project sites on occasion, and as required, as part of project supervision,</li> <li>Reviewing, approving, and disclosing ESMPs on ILBANK's official website.</li> <li>ILBANK will forward the incident report to the Bank immediately upon receipt from the KASKİ.</li> </ul>
KASKİ PIU	<ul style="list-style-type: none"> <li>Preparation of KASKİ's project documents in accordance with WB requirements and providing guidance on stakeholder consultation and announcement requirements,</li> <li>Providing guidance to KASKİ officials and consultants on WB's requirements (documents and procedures) on environmental assessment, physical cultural resources, land acquisition and involuntary resettlement, natural habitats, forests and international waterways,</li> <li>Reviewing the documents related to the environmental and social assessment of the project, provide comments to consultants, and giving official approval to these documents and procedures in accordance with the WB ESF requirements,</li> <li>Following of monitoring works that are related to environmental and social mitigation measures and will be conducted during the implementation of the ESMP,</li> <li>Informing ILBANK via Environmental and Social Monitoring Reports (ESMRs), which will be submitted by KASKİ quarterly.</li> <li>Submitting Project Progress Reports to ILBANK every six (6) months together with Grievance Register,</li> <li>Obtaining the opinions of relevant groups and local environmental/social experts about the environmental and social aspects of the project implementation and meeting with these groups during the field visits, when necessary,</li> <li>Providing coordination and communication regarding the field visits to be made within the scope of the WB/ILBANK implementation support missions regarding the environmental and social protection measures of the project implementation.</li> <li>The KASKİ will submit the incident report, including root cause analysis, precautions and compensation measures taken, to ILBANK within 30 business days.</li> </ul>
Supervisor Consultant	<ul style="list-style-type: none"> <li>Supervision of construction works and installation of equipment,</li> <li>Preparing the tender documents during the implementation, carrying out the tenders in accordance with the legislation of the Public Procurement Authority and the legal requirements of WB, following the Construction Contract and working in cooperation with ILBANK for construction supervision,</li> <li>Implementation of the ESMP and related management plans and fulfillment of all commitments under the ESMP,</li> <li>Sharing the ESMP with the Contractor, guiding the Contractor in preparing the sub-management plans, approving these plans,</li> <li>Updating the ESMP when necessary and sharing additional commitments with the Contractor,</li> <li>Environmental social review, monitoring and audits related to ESMP practices, evaluation of results,</li> <li>Informing ILBANK via Environmental and Social Monitoring Reports (ESMRs) monthly, which will be prepared in line with ESMP and submitted by contractors on a monthly basis,</li> <li>Auditing contractor activities in line with ESMP requirements,</li> <li>Providing EHS trainings to all Project staff,</li> <li>Ensuring compliance with project standards, taking urgent action in case of non-compliance,</li> <li>Stopping work in any situation that threatens environment and community and occupational health and safety,</li> <li>Preparing time-bound action plans for the contractor in case of non-compliance,</li> <li>Using the contractual authority and notifying KASKİ on time if non-compliances persist,</li> <li>Providing follow-up and analysis of environmental (including OHS) and social accidents/incidents,</li> <li>Ensuring stakeholder consultation, implementing the grievance mechanism, ensuring continuous information transfer through open communication,</li> <li>Notify ILBANK and WB within no later than 48 hours for accidents resulting in injury of any contingencies such as environmental, social and labor issues or accidents, incidents or loss of time that has or is likely to have a significant adverse impact on the environment, affected</li> </ul>



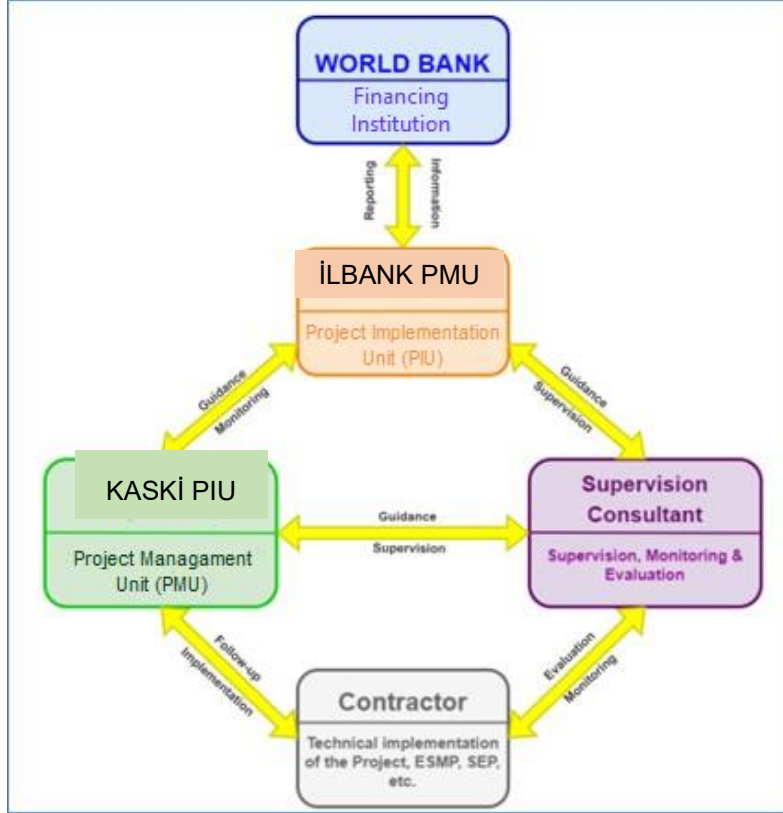
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Institution	Roles and Responsibilities
	<p>communities, the public or workers. Moreover, these notifications will be performed in line with ESMF,</p> <ul style="list-style-type: none"><li>• Coordinating the actions and evaluations in case of a change due to engineering/design changes, route/location changes, legislative changes related to environmental and social issues, authorization provision changes, new environmental/social data, construction/operation strategy changes.</li></ul>
Contractor	<ul style="list-style-type: none"><li>• Fulfillment of all requirements of ESMP and other management plans,</li><li>• Implementation of additional commitments determined by KASKİ,</li><li>• Ensuring compliance with project standards, obtaining all relevant permits and licenses,</li><li>• Monitoring of construction activities (including subcontractor activities) and taking measures within the scope of ESMP,</li><li>• Development of sub-management and monitoring plans/procedures in accordance with the ESMP structure, implementation after the approval of KASKİ,</li><li>• Employment of competent Environmental, Social and OHS Experts (at least one Social Expert, one Environmental Expert and one OHS Expert) within the scope of the project,</li><li>• Providing necessary training on environmental and social issues to its and subcontractor's personnel,</li><li>• Ensuring the follow-up and analysis of environmental and social accidents,</li><li>• Environmental and social audits, monitoring and audits related to ESMP practices, reporting to KASKİ,</li><li>• Submission of monthly Environmental and Social Monitoring Reports (ESMRs) to the KASKİ,</li><li>• Promptly notify the KASKİ in case of any incident or accident related to the Project which has, or is likely to have, a significant adverse effect on the environment, the affected communities, the public and workers such as OHS accidents or that result in threatening community health and safety and the KASKİ will immediately (not later than 48 hours) inform İLBANK, and İLBANK will inform the World Bank. In such cases, the KASKİ will provide sufficient details regarding the incident or accident, findings of the Root Cause Analysis (RCA), indicating immediate measures taken or that are planned to be taken to address it, compensation paid, and any information provided by any contractor and supervising entity/consultant, as appropriate. Develop and implement Human Resource Management Procedure including working conditions, fair treatment, non-discrimination, equal opportunity, vulnerable/disadvantaged workers, GBV, SEA/SH, prevention of child labor and forced labor issues under the project's Labor and Employment Policy for construction phase</li></ul>



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Figure 6-1 Summary of Flowchart of Roles and Responsibilities





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Table 6-2 List of KASKİ PIU

Project Implementation Unit Personnel List		
<b>Contract Management</b>		
Alaattin YALÇIN	Branch Manager	alaattiny@kaski.gov.tr
<b>Procurement Unit</b>		
Savaş GÖN	Branch Manager	savasg@kaski.gov.tr
Süleyman HAMURCU	Construction Technician	shamurcu@kaski.gov.tr
<b>Technical Management</b>		
Erol AYKAR	Department Head	erolaykar@kaski.gov.tr
<b>Technical Unit</b>		
Mehmet TEKİNER	Branch Manager - Mechanical Engineer	tekinermehmet@kaski.gov.tr
Murat ŞAHİN	Civil Engineer	msahin@kaski.gov.tr
Turan ÖZLÜ	Environmental Engineer	turanozlu@kaski.gov.tr
Abdullah TEMİZSOY	Civil Engineer	atemizsoy@kaski.gov.tr
Çađrı EYLİKLER	Electrical - Electronics Engineer	cagrie@kaski.gov.tr
<b>Financial Management</b>		
Necmettin KOCAKAPLAN	Branch Manager	necmettink@kaski.gov.tr
<b>Financial Unit</b>		
Kamil GÖREN	Officer	kamilg@kaski.gov.tr
<b>Social Unit</b>		
Hasan EKİRİKAYA	Social Expert	hekrikaya@kaski.gov.tr
<b>OHS</b>		
Alemdar ÜNLÜ	Manager	alemdarunlu@kaski.gov.tr
<b>Monitoring and Evaluation</b>		
Fevzi DURMUŞ	Environmental Engineer	fevzi@kaski.gov.tr



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## 7 CAPACITY DEVELOPMENT AND TRAINING

One of the basic requirements of the Environmental and Social Management Plan (ESMP) is the training of the Project Owner and contractor's senior management and employees. In this context, the PIU of KASKI will be responsible for environmental and social trainings. The unit will also be responsible for monitoring the Contractor's training-related actions. The main topics of the trainings are as follows:

### Environmental

- Soil pollution control
- Waste Management
- Water pollution control
- Air quality
- Noise control
- Protection of the biological environment
  
- Occupational Health and Safety (OHS)
  - Legal consequences of occupational accidents and occupational diseases
  - Toolbox talks
  - Job-specific talks
  - Labor legislation
  - Legal rights and responsibilities of employees
  - Basic occupational health and safety trainings
  - Duty, authority and responsibility trainings
  - Work permit system
  - Risk assessment and job hazard analysis
  - Workplace cleanliness and order
  - Causes of occupational diseases
  - Hazards of asbestos and protection measures in dismantling works.
  - Biological and psychosocial risk factors
  - First aid
  - Emergency drills
  - Evacuation and rescue
  - Manual lifting and transportation
  - Flammability, ignitability, fire and fire protection
  - Safe use of work equipment

### Social

- CoC training
- Sensitization on GBV and SEA/SH
- Grievance Mechanism

All institutions will strive to ensure that the reporting, which constitutes the most important element of communication in the system, is done in accordance with the specified standards, complete, accurate information, and on time.





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## 8 IMPLEMENTATION SCHEDULE AND COST ESTIMATES

Cost estimates and implementation schedule of the project are shown in Table 8-1 and Figure 8-1.

Table 8-1 Elements that Constitute Project Cost

Budget Item	Estimated Cost
<b>Construction Phase</b>	
Environmental Expert	Key staff (*)
Social Expert	Key staff (*)
OHS Expert	Key staff (*)
Monitoring (Measurements and laboratory analyses)	Included in the contractor's budget (**)
Financial Experts	No extra cost (***)
Technical Experts	No extra cost (***)
<b>Operation Phase</b>	
Monitoring (Measurements and laboratory analyses)	Included in the operation budget of KASKİ (**)
Financial Experts	No extra cost (***)
Technical Experts	No extra cost (***)

(\*) *Recruitments of specialists shall be financed under the budget of supervision consultancy services. Relevant cost estimates are taken into account at the initial stage of the consultant selection. The contractors are obliged to hire environmental, social and OHS experts for the implementation and monitoring of ESMP within the scope and price of their bids. At this stage monthly cost estimated per specialist is 1,000 €/month)*



(\*\*) *The laboratory and testing obligations and relevant reporting responsibility will be included within the works contract, during the construction period and the defect liability period. Later, for the operation stage, this responsibility will be transferred to KASKİ.*

(\*\*\*) *Since KASKİ permanent staff will be appointed to these positions, there will be no extra cost to the Project budget.*



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Figure 8-1 The Proposed Implementation Schedule, as of June 2024

No	Year Item/Month	2024												2025												2026												2027											
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
<b>W1-Construction of Kayseri Centrum East Region 1.Stage Water Supply Project</b>																																																	
1	Design Review and Revisions (by previously selected and assigned FRIT II Works - TA Company)																																																
2	Preparation of bidding documents, bidding and bid evaluation (by TA and KASKİ)																																																
3	Contract signing and Construction										1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18																					
4	Defects Liability Period (DLP)																										1	2	3	4	5	6	7	8	9	10	11	12											
	 Bid advertisement and preparation																																																
	 Bid evaluation																																																







*This project is co-funded by the European Union, the Republic of Turkey and the World Bank  
Bu Proje Avrupa Birliđi, Türkiye Cumhuriyeti ve Dünya Bankası tarafından ortaklařa finanse edilmektedir*

## 9 STAKEHOLDER ENGAGEMENT

A separate Stakeholder Engagement Plan (SEP) has been prepared for the Project, based on the World Bank's Environmental and Social Standard 10 on Stakeholder Engagement. After approval of the reports, the SEP can be found here: <https://www.kaski.gov.tr>



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Table 9-1 Summary of the Backgrounds Studies

Stakeholder	Interviewee / Title	Interview Date and Place	Remarks from the Interviews
Public Authorities	Kayseri Provincial Directorate of Environment, Urbanization and Climate Change	13.12.2023 Municipality's Office	<ul style="list-style-type: none"> <li>Communication between the Institution and Project officials is effective. No negative impact of the project is expected. Meeting the drinking water needs of the region is considered a priority. No complaints received.</li> </ul>
Public Authorities	Kayseri Metropolitan Municipality Land Registry and Expropriation Branch Directorate	13.12.2023 Municipality's Office	<ul style="list-style-type: none"> <li>As a result of construction and population growth, the need for drinking water is also increasing. For this reason, the project is deemed necessary. No negative impact of the project is expected. No complaints received.</li> </ul>
Public Authorities	Talas Municipality	13.12.2023 Municipality's Office	<ul style="list-style-type: none"> <li>It has been stated that the project will improve the quality of drinking water and will not have any negative effects. The region has a library, gym, bicycle path, etc. for students. It needs social areas. Project officials were requested to meet this need.</li> </ul>
Public Authorities	Melikgazi Municipality	13.12.2023 Municipality's Office	<ul style="list-style-type: none"> <li>It was stated that the project was necessary because the region is a region that receives immigration. No complaints received.</li> </ul>
Interviews with Mukhtar	Mukhtar of Hunat Neighborhood	08.12.2024 By the Phone Interview	<ul style="list-style-type: none"> <li>The mukhtar's communication with project officials is limited. It is stated that communication can be done face to face. Project officials are requested to provide social facilities for the child population in the neighborhood and support to poor households.</li> </ul>
Interviews with Mukhtar	Mukhtar of Köşk Neighborhood	13.12.2023 Mukhtar's Office	<ul style="list-style-type: none"> <li>The mukhtar's communication with the project officials is effective. She requests living space for the stray animals in the neighborhood from the project authorities.</li> </ul>
Interviews with Mukhtar	Mukhtar of Battalgazi Neighborhood	12.12.2023 Mukhtar's Office	<ul style="list-style-type: none"> <li>The Mukhtar stated that communication with project officials was effective. She stated that the need for the use of the facility has increased with increasing industrialization, population growth and migration to the city. She demands that vocational courses be provided to create employment for disadvantaged individuals in the neighborhood</li> </ul>
Interviews with Mukhtar	Mukhtar of Erenköy Neighborhood	12.12.2023 Mukhtar's Office	<ul style="list-style-type: none"> <li>No negative impact is expected from the project.</li> <li>No complaints received.</li> <li>The Mukhtar demands that a sewer system be built.</li> </ul>
Interviews with Mukhtar	Mukhtar of Mevlana Neighborhood	12.12.2023 Mukhtar's Office	<ul style="list-style-type: none"> <li>The density of the neighborhood's population is high. Moreover, the Mukhtar stated that the neighborhood is a neighborhood that receives immigrants. For this reason, the project is deemed necessary. No complaints received.</li> </ul>



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Stakeholder	Interviewee / Title	Interview Date and Place	Remarks from the Interviews
Interviews with Mukhtar	Mukhtar of Tacettin Veli Neighborhood	27.05.2024 By the Phone Interview	<ul style="list-style-type: none"><li>There are 300 refugee households living in the neighborhood. The Mukhtar stated that the neighborhood needs employment. She has no information about the project. Open to communication.</li></ul>
Interviews with Mukhtar	Mukhtar of Gültepe Neighborhood	24.05.2024 By the Phone Interview	<ul style="list-style-type: none"><li>Mukhtar stated that there are infrastructure problems in the neighborhood. He stated that the need for the use of the facility has increased with the population growth in the neighborhood and migration to the city. He stated that he communicated with KASKI regarding infrastructure problems. He has no information about the project.</li></ul>
Interviews with Mukhtar	Mukhtar of Yenidođan Neighborhood	24.05.2024 By the Phone Interview	<ul style="list-style-type: none"><li>He stated that the population of the neighborhood has increased due to urban transformation. There are 300 poor households in the neighborhood. He has no information about the project. He requests the project authorities to contact him. No complaints were received.</li></ul>
Employees of the Project	Blue/White- Collar Employees	12.12.2023 KASKI Project Office	<ul style="list-style-type: none"><li>Within the scope of Internal Stakeholder Interviews, interviews were held with 4 blue-collar and 5 white-collar employees employed within the scope of the Project.</li><li>They receive their salaries regularly. Working hours are 08:30-17:30. They are off on weekends. They can provide solutions by communicating their complaints verbally. No complaints received.</li></ul>
Subcontracted Employee of the Project	Cafeteria Staff, Cleaning Staff	12.12.2023 KASKI Project Office	<ul style="list-style-type: none"><li>4 KASKI Personnel Inc. Interviewed with employee. Working hours are 08:30-17:30. They receive their salaries regularly. They can use their annual leave whenever they want. When they have a problem, complaint or suggestion at work, they provide a solution by communicating it verbally to their managers. No complaints received..</li></ul>



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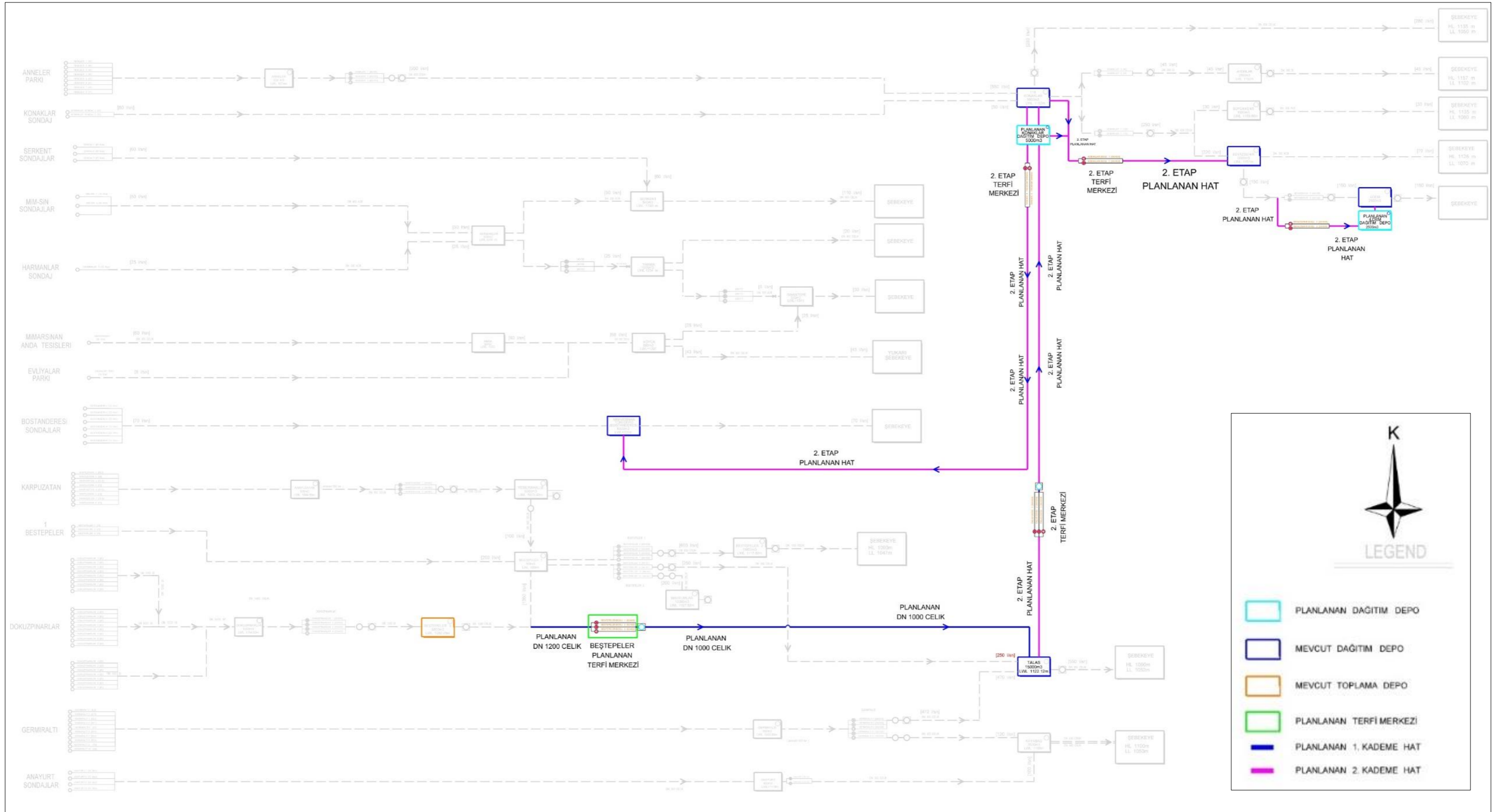


# ANNEXES



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## ANNEX-1. WATER SOURCES AND WATER DISTRIBUTION SYSTEM DIAGRAM





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Bu Proje Avrupa Birliđi, Türkiye Cumhuriyeti ve Dünya Bankası tarafından ortaklařa finanse edilmektedir

## ANNEX-2. KAYSERİ METROPOLİTAN MUNICIPALITY CONSENT LETTER



T.C.  
KAYSERİ BÜYÜKŞEHİR BELEDİYE BAŐKANLIđI  
İmar ve Şehircilik Daire Başkanlığı

Tape ve İletim Şube İhtisarı  
Sayı: E-29725031-752-2024-7/259  
Tarih: 03.01.2024  
Dosya Numarası: 2023-100748



Saya : E-29725031-752-2024-7/259  
Konu : Muvafakat

03.01.2024

### KAYSERİ SU VE KANALİZASYON İDARESİ GENEL MÜDÜRLÜĐÜNE

İliđi : 29.12.2023 Tarih, E-31566421-755.99-44928 Sayılı Yazınız.

İliđi sayılı yazınız ile Genel Müdürlüğünüz tarafından içme suyu iletim hatları ve terfi merkezi yapılması planlanan, mülkiyeti Kurumunuza ait olan, Kayseri ili, Melikgazi İlçesi, Karacaođlu Mahallesi, 11216 ada, 76 parsel numaralı taşınmazda ekteki sayısal veride belirtilen alanda içme suyu iletim hatları ve terfi merkezi hattı yapılması için muvafakat verilmesi istenilmiştir.

Mülkiyeti Belediyemize ait Kayseri İli, Melikgazi İlçesi, Karacaođlu Mahallesi, 11216 ada, 76 parsel numaralı taşınmazda, ekteki sayısal veride belirtilen alanda Kayseri Su ve Kanalizasyon İdaresi Genel Müdürlüğü tarafından içme suyu iletim hatları ve terfi merkezi hattı yapılmasında Belediyemiz açısından herhangi bir sakınca bulunmamaktadır.

Bilgilerinizi ve geređini rica ederim.

Handi ELCUMAN  
Başkan a.  
Genel Sekreter Yardımcısı

Bu belge, güvenli elektronik imza ile imzalanmıştır.

Dođrulama Kodu: B2C9B02F

Dođrulama Adresi: <https://turkiye.gov.tr/kayseri-buyuksehir-belediyesi-ebys>

Adres: Mustafa Kemal Paşa Bulvarı No:15  
Posta Kodu: 38010 Kocasinan / KAYSERİ  
Telefon No: (0352) 222 8960 Fax No: (0352) 222 8958  
Kep Adresi: [kayseribelediyesi@hs01.ksp.tr](mailto:kayseribelediyesi@hs01.ksp.tr)  
Web Adresi: <http://www.kayseri.bel.tr>

Bilgi için: MEHMET REFAK BOÇAKCI -  
Tekniker  
Telefon No:03522071642



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## ANNEX-3. BEŐTEPELER PUMP STATION DEEDS

BU BELGE TOPLAM 2 SAYFADAN OLUŐMAKTADIR BİLGİ AMAÇLIDIR.

Tarih: 28-12-2023-09:05



Kayıd Oluőturan: Osman Bayraktar ( Kayseri Su ve Kanalizasyon İdaresi Genel Müdürlüğü )

Tapu Kaydı (Aktif Malikler için Detaysız - ŐBİ yok)

TAPU KAYIT BİLGİSİ

Zemin Tipi:	AnaTasınmaz	Ada/Parsel:	11216/7
Taşınmaz Kimlik No:	44096544	AT Yüzölçüm(m2):	9374.58
İl/ilçe:	KAYSERİ/MELİKGAZİ	Bađımsız Bölüm Nitelik:	
Kurum Adı:	Melikgazi	Bađımsız Bölüm Brüt Yüzölçümü:	
Mahalle/Köy Adı:	KARACAOĞLU Mah.	Bađımsız Bölüm Net Yüzölçümü:	
Mevkii:	Çukur Harman	Blok/Kat/Giriş/BBNo:	
Cilt/Sayfa No:	9/886	Arsa Pay/Payda:	
Kayıt Durum:	Aktif	Ana Taşınmaz Nitelik:	Tarla

### MÜLKİYET BİLGİLERİ

(Hisse) Sistem No	Malik	El Birliđi No	Hisse Pay/ Payda	Metrekare	Toplam Metrekare	Edinme Sebebi-Tarih-Yevmiye	Terkin Sebebi-Tarih-Yevmiye
124275276	(SN:2861557) KAYSERİ BÜYÜKŐEHİR BELEDİYESİ SU VE KANALİZASYON İDARESİ (KASKİ) VKN:5400039871	-	1/1	9374.58	9374.58	3402 S.Y.nın 22/A Md. Geređince Yenilenenin Tescili 29-12-2010	-

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BU BELGE TOPLAM 2 SAYFADAN OLUŐMAKTADIR BİLGİ AMAÇLIDIR.

Tarih: 28-12-2023-09:06



Kayıd Oluőturan: Osman Bayraktar ( Kayseri Su ve Kanalizasyon İdaresi Genel Müdürlüğü )

Tapu Kaydı (Aktif Malikler için Detaysız - ŐBİ yok)

TAPU KAYIT BİLGİSİ

Zemin Tipi:	AnaTasınmaz	Ada/Parsel:	11216/8
Taşınmaz Kimlik No:	44096545	AT Yüzölçüm(m2):	10714.31
İl/ilçe:	KAYSERİ/MELİKGAZİ	Bađımsız Bölüm Nitelik:	
Kurum Adı:	Melikgazi	Bađımsız Bölüm Brüt Yüzölçümü:	
Mahalle/Köy Adı:	KARACAOĞLU Mah.	Bađımsız Bölüm Net Yüzölçümü:	
Mevkii:	Çukur Harman	Blok/Kat/Giriş/BBNo:	
Cilt/Sayfa No:	9/887	Arsa Pay/Payda:	
Kayıt Durum:	Aktif	Ana Taşınmaz Nitelik:	Tarla

### MÜLKİYET BİLGİLERİ

(Hisse) Sistem No	Malik	El Birliđi No	Hisse Pay/ Payda	Metrekare	Toplam Metrekare	Edinme Sebebi-Tarih-Yevmiye	Terkin Sebebi-Tarih-Yevmiye
124275277	(SN:2861557) KAYSERİ BÜYÜKŐEHİR BELEDİYESİ SU VE KANALİZASYON İDARESİ (KASKİ) VKN:5400039871	-	1/1	10714.31	10714.31	3402 S.Y.nın 22/A Md. Geređince Yenilenenin Tescili 29-12-2010	-

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## Annex-4. Allocation Request Letter Regarding Ildem Reservoir



T.C.  
KAYSERİ BÜYÜKŞEHİR BELEDİYESİ SU VE KANALİZASYON  
İDARESİ GENEL MÜDÜRLÜĐÜ  
Plan Proje Dairesi Başkanlıđı



Sayı : E-31566421-756.01-40161  
Konu : Tařınmaz Tahsisi

15.09.2023

### MİLLİ EMLAK MÜDÜRLÜĐÜNE

Kayseri ili Melikgazi ilçesi Gesi Mahallesi 245 ada 1 parsel numaralı Maliye Hazinesinin mülkiyetinde bulunan taşınmazda Genel Müdürlüğümüze ait Su Deposu bulunmaktadır olup, mevcut imar planında Belediye Hizmet Alanı (Su Deposu) olarak planlanmıştır.

Bahse konu taşınmaza ilişkin Tahsis Talep Formunu yazımız ekinde gönderilmiş olup, Genel Müdürlüğümüze tahsisi hususunda,  
Gereğini rica ederim.

Fatih Mehmet DURMUŞÇELEBİ  
Genel Müdür a.  
Genel Müdür Yardımcısı

Ek:  
1- Tahsis Talep Formu  
2- İmar Durumu

Bu belge, güvenli elektronik imza ile imzalanmıştır.

Belge Doğrulama Kodu : 80AY-Y8VG-87Y0 Belge Doğrulama Adresi : <https://ebys.kaski.gov.tr/SorguSorgula.aspx>

Adres: Yakut Mah. Mustafa Kemal Paşa Bul. No:186 P.K.:38090 Kocasinan /  
KAYSERİ  
Telefon No : 352 432 0 432  
e-Posta :  
Kep Adresi : kaski@tr03.kep.tr

Fax No : 352 337 09 32  
İnternet Adresi : [www.kaski.gov.tr](http://www.kaski.gov.tr)

Bilgi İçin : Fatma OĞULDESTE

Memur  
Dahili No:352 432 22 01



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## ANNEX-5. TALAS RESERVOIR DEEDS

BU BELGE TOPLAM 2 SAYFADAN OLUŐMAKTADIR BİLGİ AMAÇLIDIR.

Tarih: 29-12-2023-14:48



Kayı Oluőturan: Osman Bayraktar ( Kayseri Su ve Kanalizasyon İdaresi Genel Müdürlüğü )

Tapu Kaydı (Aktif Malikler için Detaysız - ŐBİ yok)

TAPU KAYIT BİLGİSİ

Zemin Tipi:	AnaTasınmaz	Ada/Parsel:	0/406
Taşınmaz Kimlik No:	34572183	AT Yüzölçüm(m2):	9430.00
İl/ilçe:	KAYSERİ/TALAS	Bađımsız Bölüm Nitelik:	
Kurum Adı:	Talas	Bađımsız Bölüm Brüt Yüzölçümü:	
Mahalle/Köy Adı:	TALAS Mah.	Bađımsız Bölüm Net Yüzölçümü:	
Mevkii:	TAŐLIBAŐI	Blok/Kat/Giriő/BBNo:	
Cilt/Sayfa No:	5/406	Arsa Pay/Payda:	
Kayı Durum:	Aktif	Ana Taşınmaz Nitelik:	BAĐ

### MÜLKİYET BİLGİLERİ

(Hisse) Sistem No	Malik	El Birliđi No	Hisse Pay/ Payda	Metrekare	Toplam Metrekare	Edinme Sebebi-Tarih-Yevmiye	Terkin Sebebi-Tarih-Yevmiye
85189779	(SN:6412494) KAYSERİ BÜYÜŐŐEHİR BELEDİYESİ SU VE KANALİZASYON İDARESİ GENEL MÜDÜRLÜĐÜ VKN:5400039871	-	1/1	9430.00	9430.00	Diđer Tahsisler 23-06-1992 816	-

1 / 2

BU BELGE TOPLAM 2 SAYFADAN OLUŐMAKTADIR BİLGİ AMAÇLIDIR.

Tarih: 29-12-2023-14:47



Kayı Oluőturan: Osman Bayraktar ( Kayseri Su ve Kanalizasyon İdaresi Genel Müdürlüğü )

Tapu Kaydı (Aktif Malikler için Detaysız - ŐBİ yok)

TAPU KAYIT BİLGİSİ

Zemin Tipi:	AnaTasınmaz	Ada/Parsel:	0/408
Taşınmaz Kimlik No:	34572184	AT Yüzölçüm(m2):	4550.00
İl/ilçe:	KAYSERİ/TALAS	Bađımsız Bölüm Nitelik:	
Kurum Adı:	Talas	Bađımsız Bölüm Brüt Yüzölçümü:	
Mahalle/Köy Adı:	TALAS Mah.	Bađımsız Bölüm Net Yüzölçümü:	
Mevkii:	TAŐLIBAŐI	Blok/Kat/Giriő/BBNo:	
Cilt/Sayfa No:	5/408	Arsa Pay/Payda:	
Kayı Durum:	Aktif	Ana Taşınmaz Nitelik:	BAĐ

### MÜLKİYET BİLGİLERİ

(Hisse) Sistem No	Malik	El Birliđi No	Hisse Pay/ Payda	Metrekare	Toplam Metrekare	Edinme Sebebi-Tarih-Yevmiye	Terkin Sebebi-Tarih-Yevmiye
85189780	(SN:6412494) KAYSERİ BÜYÜŐŐEHİR BELEDİYESİ SU VE KANALİZASYON İDARESİ GENEL MÜDÜRLÜĐÜ VKN:5400039871	-	1/1	4550.00	4550.00	Diđer Tahsisler 23-06-1992 816	-

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BU BELGE TOPLAM 2 SAYFADAN OLUŐMAKTADIR BİLGİ AMAÇLIDIR.

Tarih: 29-12-2023-14:49



Kayıd Oluőturan: Osman Bayraktar ( Kayseri Su ve Kanalizasyon İdaresi Genel Müdürlüğü )

Tapu Kaydı (Aktif Malikler için Detaysız - ŐBİ yok)

TAPU KAYIT BİLGİSİ

Zemin Tipi:	AnaTasınmaz	Ada/Parsel:	0/409
Taşınmaz Kimlik No:	34572185	AT Yüzölçüm(m2):	9560.00
İl/İlçe:	KAYSERİ/TALAS	Bağımsız Bölüm Nitelik:	
Kurum Adı:	Talas	Bağımsız Bölüm Brüt Yüzölçümü:	
Mahalle/Köy Adı:	TALAS Mah.	Bağımsız Bölüm Net Yüzölçümü:	
Mevkii:	TAŐLIBAŐI	Blok/Kat/Giriő/BBNo:	
Cilt/Sayfa No:	5/409	Arsa Pay/Payda:	
Kayıt Durum:	Aktif	Ana Taşınmaz Nitelik:	TARLA

MÜLKİYET BİLGİLERİ

(Hisse) Sistem No	Malik	El Birliđi No	Hisse Pay/ Payda	Metrekare	Toplam Metrekare	Edinme Sebebi-Tarih-Yevmiye	Terkin Sebebi-Tarih-Yevmiye
85189781	(SN:6412494) KAYSERİ BÜYÜKŐEHİR BELEDİYESİ SU VE KANALİZASYON İDARESİ GENEL MÜDÜRLÜĐÜ VKN:5400039871	-	1/1	9560.00	9560.00	Diđer Tahsisler 23-06-1992 816	-

1 / 2

BU BELGE TOPLAM 2 SAYFADAN OLUŐMAKTADIR BİLGİ AMAÇLIDIR.

Tarih: 29-12-2023-14:47



Kayıd Oluőturan: Osman Bayraktar ( Kayseri Su ve Kanalizasyon İdaresi Genel Müdürlüğü )

Tapu Kaydı (Aktif Malikler için Detaysız - ŐBİ yok)

TAPU KAYIT BİLGİSİ

Zemin Tipi:	AnaTasınmaz	Ada/Parsel:	0/410
Taşınmaz Kimlik No:	34572186	AT Yüzölçüm(m2):	6170.00
İl/İlçe:	KAYSERİ/TALAS	Bağımsız Bölüm Nitelik:	
Kurum Adı:	Talas	Bağımsız Bölüm Brüt Yüzölçümü:	
Mahalle/Köy Adı:	TALAS Mah.	Bağımsız Bölüm Net Yüzölçümü:	
Mevkii:	TAŐLIBAŐI	Blok/Kat/Giriő/BBNo:	
Cilt/Sayfa No:	5/410	Arsa Pay/Payda:	
Kayıt Durum:	Aktif	Ana Taşınmaz Nitelik:	TARLA

MÜLKİYET BİLGİLERİ

(Hisse) Sistem No	Malik	El Birliđi No	Hisse Pay/ Payda	Metrekare	Toplam Metrekare	Edinme Sebebi-Tarih-Yevmiye	Terkin Sebebi-Tarih-Yevmiye
85189782	(SN:6412494) KAYSERİ BÜYÜKŐEHİR BELEDİYESİ SU VE KANALİZASYON İDARESİ GENEL MÜDÜRLÜĐÜ VKN:5400039871	-	1/1	6170.00	6170.00	Diđer Tahsisler 23-06-1992 816	-

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## ANNEX-6. EIA OPINION



T.C  
KAYSERİ VALİLİĐİ  
Çevre, Şehircilik ve İklim Deđişikliđi İl Müdürlüğü



Sayı : E-27332451-220.03-8510679

16.01.2024

Konu : ÇED Muafiyeti-KASKI Su İletimi

### KAYSERİ SU VE KANALİZASYON İDARESİ GENEL MÜDÜRLÜĐÜNE

İlgi : 15/01/2024 tarih ve "193409" Referans No'lu Başvuru.

İlgide kayıtlı yazı ile İlimiz, Beştepeler Tesislerinden Talas 15.000 m<sup>3</sup> kapasiteli deposuna içme suyu taşınması için hazırlanan Dođu Bölgesi 1. Etap İçme Suyu projesinin Çevresel Etki Deđerlendirmesi (ÇED) Yönetmeliđi kapsamında deđerlendirilmesi talep edilmiştir.

Bu kapsamda, söz konusu projenin akarsu havzaları arasında olmadığı ve boru ile içme suyu taşıma amaçlı olması nedeni ile 29.07.2022 tarih ve 31907 sayılı Resmî Gazetede yayımlanarak yürürlüğe giren ÇED Yönetmeliđi Ek-1 ve Ek-2 Listelerinde yer almadığı için anılan Yönetmelik hükümlerinden muaf deđerlendirilmiştir.

Ancak, planlanan yatırım ile ilgili olarak, 5491 sayılı kanunla deđişik 2872 sayılı Çevre Kanunu ile bu Kanuna istinaden çıkarılan Yönetmeliklerin ilgili hükümlerine uyulması ve diđer mer'î mevzuat çerçevesinde öngörülen gerekli izinlerin alınması, ekolojik dengenin bozulmamasına, çevrenin korunmasına ve geliştirilmesine yönelik tedbirlere riayet edilmesi gerekmektedir.

Bilgilerinizi ve geređini arz ederim.

Sibel LİVDUMLU  
Çevre, Şehircilik ve İklim Deđişikliđi İl Müdürü

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## ANNEX-7. DSI INSTITUTIONAL OPINION



T.C.  
TARIM VE ORMAN BAKANLIđI  
Devlet Su İşleri Genel Müdürlüğü  
12. Bölge Müdürlüğü



Sayı : E-82478178-120-4124249

08.12.2023

Konu : Görüş

### KAYSERİ SU VE KANALİZASYON İDARESİ GENEL MÜDÜRLÜĞÜNE

İlgi : 30.11.2023 tarihli ve E-79554265-755.99-43645 sayılı yazınız.

İlgi yazıda; Daire Başkanlığınızca hazırlanan Dođu Bölgesi İçme Suyu Projesi kapsamında yapılacak olan imalatlar dahilinde, Erciyes Üniversitesi Fakülte Hastanesi giriři karřısında bulunan DSI kanalının altından, yatay delgi yöntemiyle yapılacak geçiřin koordinatları Ek-1 de, Talas Kız Yurdu önündeki DSI kanalının ise askıda geçiř yoluyla yapılacak imalatının koordinatları Ek-2 de ve Dođu Bölgesi İçme Suyu Projesinin hat güzergahı Ek-3 te gönderildiđi belirtilmiř olup konu ile ilgili teknik görüşünüzün bildirilmesi istenmiřtir.

Konu ile ilgili gerekli incelemeler yapılmıřtır. Talas Kız Yurdu önündeki tařkın kontrol kanalı üzerinde yapılması planlanan İçme Suyu Projesi kapsamında, askıda geçiř yoluyla yapılacak imalatın alt kotu ile tařkın kontrol tesisinin duvar üst kotu arasında minimum 1,00 m yükseklikte hava payı bırakılmalıdır. Ayrıca tařkın kontrol tesisine ait duvarlar yapılacak imalatların mesneti olarak kullanılmamalıdır. Askıda geçiř yoluyla yapılacak imalatlara ait ayaklar, tařkın kontrol tesisinin duvarlarının dıř kısmında kalacak řekilde, tařkın kontrol tesisi temelinde zarar vermeden ve duvar alt kotuna kadar kazılarak oluřturulacak temel üzerine mesnetlenmelidir.

İçme Suyu Projesi kapsamında yatay delgi yöntemiyle yapılacak geçiřlerin tařkın kontrol tesisini enine kesmesi durumunda; planlanan projede yapılacak hattın üst kotu, tařkın kontrol tesisi talveg kotunun azami 2,00 m altından geçirilmeli ve koruyucu tedbirler alınmalı,

Tařkın kontrol tesisimize ve tesis güzergahı boyunca devam eden işletme bakım yollarına herhangi bir müdahalede bulunulmalı,

İçme Suyu Projesi imalatının inřası ařamasında çıkabilecek; pasa, hafriyat vb. atık malzemeler dere yataklarına atılmamalı ve stoklanmamalı,

Faaliyet esnasında çıkacak atıklar konusunda 2872 sayılı Çevre Kanunu esaslarına uyulması sağlanmalı,

İçme Suyu Projesi hattının geçiř güzergahında uyarıcı ve ikaz levhalarının görünür řekilde buhundurmalıdır.

Tařkın kontrol tesisleri ve dere yatakları için, 3 Mayıs 2019 tarihli ve 30763 sayılı Resmî Gazete'de yayımlanan Tařkın ve Rüşubat Kontrolü Yönetmeliđi ve 9 Eylül 2006 tarihli ve 26284 sayılı Resmî Gazete'de yayımlanan 2006/27 sayılı Cumhurbaşkanlığı Genelgesinde bulunan hususlara uyulmalıdır.

Bilgilerinizi ve geređini arz ederim.

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Telefon No : Belgegeçer No :

KEP Adresi : [dsi.genel@ts01.kep.tr](mailto:dsi.genel@ts01.kep.tr)

Bilgi için Özgür SAÇLIYAN

Mühendis



1/2



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3





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## ANNEX-8. TRANSPORTATION INC. INSTITUTIONAL OPINION



Kayseri Ulaşım  
Turizm İnşaat Taahhüt Proje Mühendislik Telekomünikasyon  
Sanayi ve Ticaret A.Ş.



Sayı : E-20665131-600-37055  
Konu : Görüş

07.11.2023

### DAĞITIM YERLERİNE

İlgi : Kayseri Büyükşehir Belediye Başkanlığı 01.11.2023 tarihli ve E-26587166-313.03.01-2023-1807/26160 sayılı yazısı.

İlgi yazısında, "Doğu Bölgesi İçme Suyu Projesi" kapsamında Talas Kız Yurdu Bölgesinde Raylı Sistem Hattı altından geçmesi planlanan içme suyu hattı ile ilgili görüş talep edilmektedir.

Belirtilen bölgede yapılacak olan çalışma ile ilgili KASKİ Genel Müdürlüğü Plan Proje Daire Başkanlığı personelleri ile görüşülmüştür. 1000 mm çaplı içme suyu boru manjurlarını, boru üst kotunun ray üst kotunun en az 2,5 m altından geçmesi ve katener direklerine denk gelmemesi suretiyle yapımının hat emniyetine zarar vermeyeceği öngörülmüştür.

Bilgilerinize arz ederim.

Mehmet CANBULUT  
Genel Müdür

Doğru:

Gereği:

T.C.  
KAYSERİ BÜYÜKŞEHİR BELEDİYE BAŞKANLIĞINA Fen  
İşleri Daire Başkanlığı

Bilgi:

KAYSERİ SU VE KANALİZASYON İDARESİ GENEL  
MÜDÜRLÜĞÜNE  
T.C.  
KAYSERİ BÜYÜKŞEHİR BELEDİYESİ Ulaşım Planlama ve Raylı  
Sistem Daire Başkanlığı

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e-Posta : [hatbaskim@kayseriulasim.com](mailto:hatbaskim@kayseriulasim.com)

Kep Adresi : [kayseriulasim@hs03.kop.tr](mailto:kayseriulasim@hs03.kop.tr)

Fax No : 0352 502 0266

İnternet Adresi :

<http://www.kayseriulasim.com>

Bilgi İçin : Sercan DOĞRU

Hat Bakım Mühendisi

Dahili No : 03522077041

Vergi No : 540 008 27 77



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## ANNEX-9. Chance Finds Procedure

### 1. PURPOSE

The Archaeological Chance Find Procedure is prepared to provide guidance to all parties and employees regarding the actions to be taken in case of the discovery of an archeological asset.

### 2. SCOPE

It is likely to encounter archeological findings during the construction activities of the project. Any type of activity requiring excavation or any type of intervention on the landscape through earthworks has the potential to lead to the discovery or destroying of archeological entities.

### 3. PROCEDURE

Any physical remains of past human activity, including artifacts, plant, and animal remains, structural remains, and soil features are defined as archaeological entities. All actions to be carried out in case of discovery of an archaeological entity should comply with the Law on the Protection of Cultural and Natural Assets (No: 2863, Date of Approval: 21.7.1983).

In the event of the discovery of an archaeological entity, the following procedure shall be implemented:

- All construction and other relevant activities in the vicinity of the chance find will be ceased by the environmental and/or social specialist<sup>5</sup> of Contractor and/or Archaeologist of the Project or anyone, who encounters a chance find.
- The Contractor's Environmental and/or Social Specialist shall notify the Contractor's Project Manager as soon as an incidental finding is encountered. The Project Manager will inform the Museum Directorate. Enviromental and/or Social Specialist of Contractor will properly secure chance find the site via flagging, no-entry signs, etc. and prevent/limit the vehicle traffic within the immediate vicinity of chance find and also protect the site by not moving, removing or further disturbing the chance find.
- Boundaries of discovered archaeological site coordinates will be recorded and the photograph of the location and the finding shall be taken and also video record should be made.
- The site and its vicinity will be secured against damage or loss until a final decision is made about this site by Regional Board.
- The Contractor's Environmental and/or Social Specialist shall complete Section A of the Incidental Finds Form and send a copy to the Museum archaeologist within 24 hours, keep a hard copy as a record for the Project and save a copy in the Document Control System (DCS), If any human remains such as a contemporary grave or graveyard are noticed, security forces will be informed. Unless the remains are determined to be recent, the local administration (village head: mukhtar, or district governor) has the full authority.
- Further steps to be followed and proper procedures to be implemented for the management of the finding(s) (changes in the layout, conservation, preservation, restoration, or salvage) will be decided and reported in writing by the Museum Directorate.

<sup>5</sup> Will be defined in the C-ESMP.



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- In case the site is considered to be of no significance by the Museum Directorate, Environmental and/or Social Specialist of Contractor will inform the Contractor Project Manager. Subsequent of filling out Part B of Chance Find Form by Environmental and/or Social Specialist of Contractor within 24 hours while retaining a copy of the Chance Find form as a record, the construction works will proceed since no further actions are required. In case the site is considered as significant by the Museum Directorate Project Manager of Contractor will be informed by the Museum Directorate about the decision on further actions. Environmental and/or Social Specialist of Contractor will inform the Project manager. Subsequent of filling out Part B of Chance Find Form by Environmental and/or Social Specialist of Contractor within 24 hours while retaining a copy of the Chance Find form as a record, the instructions of the Museum Directorate will be followed. After some field investigation, Museum Directorate will declare their decision on the significance of the site, and the actions to be followed as per their decision are summarized in the following table..



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Site to be of No Significance	Site to be of Minor Significance	Site to be of Major Significance
<ul style="list-style-type: none"> <li>• Environmental and /or Social Specialist of Contractor will inform their managers,</li> <li>• Environmental and /or Social Specialist of Contractor will record the decision in Part C of Chance Find Form within 24 hours,</li> <li>• Environmental and /or Social Specialist of Contractor will retain a copy of Chance Find form as a record,</li> <li>• No further actions will be required,</li> <li>• This step closes out the chance find procedure,</li> <li>• <u>Construction activities may resume.</u></li> </ul>	<ul style="list-style-type: none"> <li>• A salvage excavation is to be completed</li> <li>• Museum Directorate will provide instructions, and/or supervision for salvage archaeological excavation the Environmental and /or Social Specialist of Contractor.</li> <li>• Environmental and /or Social Specialist of Contractor will inform their managers,</li> <li>• Under the guidance of Museum archaeologist (following instructions from other authorities, Kayseri Regional Board, etc.), the Project will provide a team of qualified archaeologists to conduct the salvage excavation,</li> <li>• Project Manager of Contractor will provide a report to the Museum Directorate,</li> <li>• Regional Board Directorate of Protection of Cultural Heritage will officially confirm the completion of recovery and inform the Environmental and /or Social Specialist of Contractor will inform the construction manager that no further actions are required,</li> <li>• Environmental and /or Social Specialist of Contractor will inform other managers,</li> <li>• Environmental and /or Social Specialist of Contractor will record the decision in Part C of Chance Find Form within 24 hours,</li> <li>• Environmental and /or Social Specialist of Contractor will retain a copy of Chance Find form as a record,</li> <li>• No further actions will be required,</li> <li>• This step closes out the chance find procedure</li> <li>• <u>Construction activities may resume.</u></li> </ul>	<ul style="list-style-type: none"> <li>• Excavation is to be completed,</li> <li>• The site will be treated according to “Law on the Conservation of Cultural and Natural Property (2863)”,</li> <li>• Museum Directorate will provide instructions, and/or supervision for salvage archaeological excavation to the Environmental and /or Social Specialist of Contractor. Environmental and /or Social Specialist of Contractor will inform the Project Manager of Contractor.</li> <li>• Once the excavation is completed, Representative of the Project will provide a report to Quality Assurance Manager,</li> <li>• Project Manager of Contractor will provide a report to the Museum Directorate,</li> <li>• Regional Board Directorate of Protection of Cultural Heritage will officially confirm the completion of recovery and inform the Environmental and /or Social Specialist of Contractor,</li> <li>• Site will be officially recorded and protected according to Turkish regulations,</li> <li>• Environmental and /or Social Specialist of Contractor will inform the Project Manager of Contractor that no further actions are required, or that a relocation is required,</li> <li>• Environmental and /or Social Specialist of Contractor will record the decision in Part C of Chance Find Form within 24 hours,</li> <li>• Environmental and /or Social Specialist of Contractor of the Project will retain a copy of Chance Find form as a record,</li> <li>• No further actions will be required,</li> <li>• This step closes out the chance find procedure,</li> <li>• <u>Construction activities may resume, or relocation is implemented.</u></li> </ul>





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## Chance Find Report Form

To be filled out in English (İngilizce doldurunuz.)

<b>PART A</b> <b>BÖLÜM A</b>		
Location: <i>Mevkii</i>	Date: <i>Tarih</i>	ID:
Name of person reporting chance find: <i>Rastlantısal buluntuyu rapor eden kişinin ismi</i>		
Name of contractor employee contacted: <i>İletişime geçilen yüklenici çalışanı ismi</i>		
Was work stopped in the immediate vicinity of chance find? <i>Rastlantısal buluntunun tam çevresinde iş durduruldu mu?</i>	<input type="checkbox"/> Yes <i>Evet</i>	<input type="checkbox"/> No <i>Hayır</i>
Was a buffer zone created to protect chance find? <i>Rastlantısal buluntuyu korumak için tampon bölge oluşturuldu mu?</i>	<input type="checkbox"/> Yes <i>Evet</i>	<input type="checkbox"/> No <i>Hayır</i>
<b>NOTIFICATION</b> <b>(BİLDİRİM)</b>		
Contractor Enviromental and / or Social Specialist of Contractor contacted <i>Yüklenici Çevre ve / veya Sosyal Uzmanı ile irtibata geçildi</i>	<input type="checkbox"/> Yes <i>Evet</i>	<input type="checkbox"/> No <i>Hayır</i>
pProject Manager of Contractor <i>Yüklenici Proje Müdürü ile iletişime geçildi</i>	<input type="checkbox"/> Yes <i>Evet</i>	<input type="checkbox"/> No <i>Hayır</i>
<b>CHANCE FIND DETAILS</b> <b>(RASLANTISAL BULUNTU AYRINTILARI)</b>		
GPS coordinates <i>GPS koordinatları</i>	Photo record <input type="checkbox"/> Yes <input type="checkbox"/> No (HD quality – no cell phone photos) <i>Fotoğraf kaydı Evet Hayır</i> (HD kalitesinde – cep telefonu fotoğrafı değil) If not, explain why: <i>Yok ise nedenini açıklayınız</i>	
	Other records <input type="checkbox"/> Yes <input type="checkbox"/> No Specify (drawings, HD quality videos, etc.): <i>Diđer kayıtlar Evet Hayır</i> <i>Belirtin (çizimler, HD kalite videolar, vb.)</i>	
Description of chance find: <i>Rastlantısal buluntunun tanımı</i>		
Description of site and vegetation: (e.g. surface sediment type, ground surface visibility, distance to closest watercourse, etc.) <i>Sahanın ve bitki örtüsünün tanımı: (örn. Yüzey sediman türü, yüzey zemin görünürlüğü, en yakın suyoluna olan mesafe, vb.)</i>		



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<b>PART B</b> <b>BÖLÜM B</b>		
<b>NOTIFICATION OF _____ MUSEUM DIRECTORATE ARCHAEOLOGIST</b> <b>( _____ MÜZE MÜDÜRLÜĞÜ ARKEOLOĞUNA BİLDİRİ)</b>		
Project Manager of Contractor contacted museum directorate archaeologist: <input type="checkbox"/> Yes / <i>Evet</i> <i>Yüklenici Proje Müdürü müze müdürlüğü arkeoloğu ile irtibata geçti</i> <input type="checkbox"/> No / <i>Hayır</i>		
Date of notification: <i>Bildirim tarihi</i>		
Name of museum directorate archaeologist: <i>Müze müdürlüğü arkeoloğunun ismi</i>		
Contact number of museum directorate archaeologist: <i>Müze müdürlüğü arkeoloğunun iletişim numarası</i>		
<b>DECISION OF _____ MUSEUM DIRECTORATE ARCHAEOLOGIST</b> <b>( _____ MÜZE MÜDÜRLÜĞÜ ARKEOLOĞUNUN KARARI)</b>		
Date of initial investigation: <i>İlk araştırma tarihi</i>		
<input type="checkbox"/> Site of no significance - Construction to proceed with no further investigation – End of chance find procedure <i>Önemsiz saha – İnşaat daha fazla araştırma yapılmadan devam edilebilir – rastlantısal buluntu prosedürün sonu.</i>	<input type="checkbox"/> Site of significance - Further investigation required <i>Önemli saha – Ek araştırma gerekmektedir</i>  Fill out Part C <i>Bölüm C'yi doldurun.</i>	
Date of notice to resume work : <i>İşe başlama tarihi bildirisi</i>		
Name of museum directorate archaeologist: <i>Müze müdürlüğü arkeoloğunun ismi</i>		
Contact information: <i>İletişim numarası</i>		
Contractor Environmental and/or Social Specialist contacted <i>Yüklenici Çevre ve /veya Sosyal Uzman ile irtibata geçildi</i>	<input type="checkbox"/> Yes <i>Evet</i> <input type="checkbox"/> No <i>Hayır</i>	
Project Manager of Contractor contacted <i>Yüklenici Müdürü ile irtibata geçildi</i>	<input type="checkbox"/> Yes <i>Evet</i> <input type="checkbox"/> No <i>Hayır</i>	
<b>PART C</b> <b>BÖLÜM C</b>		
<b>FURTHER FIELD INVESTIGATION</b> <b>(EK SAHA ARAŞTIRMASI)</b>		
<input type="checkbox"/> Site of no significance <i>Önemsiz saha</i>	<input type="checkbox"/> Site of minor significance <i>Az önemli saha</i>	<input type="checkbox"/> Site of major significance <i>Çok önemli saha</i>
Describe additional work to be conducted: <i>Yapılması gereken ek işlerin tanımları</i>		
Date started: <i>Başlangıç tarihi</i>	Date completed: <i>Bitiriş tarihi</i>	
Date of notice to resume work: <i>İşe başlama tarihi bildirisi</i>		
Name of museum directorate archaeologist:		



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<i>Müze müdürlüğü arkeolođunun ismi:</i>		
Contact information: <i>İletişim numarası</i>		
Environmental and /or Social Specialist of Contractor contacted <i>Yüklenicinin çevre ve /veya Sosyal Uzmanı ile irtibata geçildi.</i>	<input type="checkbox"/> Yes <i>Evet</i>	<input type="checkbox"/> No <i>Hayır</i>
Project Manager of Contractor contacted <i>Yüklenici Proje Müdürü ile irtibata geçildi.</i>	<input type="checkbox"/> Yes <i>Evet</i>	<input type="checkbox"/> No <i>Hayır</i>