

**STATE INSTITUTION FOR DEVELOPMENT OF DRINKING
WATER SUPPLY AND WASTEWATER DISPOSAL
UNDER THE WATER RESOURCES SERVICE
OF THE MINISTRY OF WATER RESOURCES, AGRICULTURE
AND PROCESSING INDUSTRY OF THE KYRGYZ REPUBLIC**



Project Implementation Unit

CLIMATE RESILIENT WATER SERVICES PROJECT

**Environmental and Social Management Plan (ESMP)
Rehabilitation of Water Supply System of Kara-Bulak Subproject
in Batken Rayon of Batken Oblast**

October 2024

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Abbreviations

AO	Ayil Okmotu
ACM	Asbestos-Containing Material
BOD	Biological Oxygen Demand
WB	World Bank
BOQ	Bills of Quantity
FUEL	Fuels and Lubricants
SIDDWSWD	State Institution for Development of Drinking Water Supply and Wastewater Disposal
KR	Kyrgyz Republic
PAP	Project Affected Persons
MWSE	Municipal Water Supply Enterprise
MWRAPI	Ministry of Water Resources, Agriculture and Processing Industry
MNRETS	Ministry of Natural Resources, Environment and Technical Supervision
GRM	Grievance Redress Mechanism
EIA	Environmental Impact Assessment
LSG	Local Self Governments
EP	Environmental Protection
RPF	Resettlement Policy Framework
PIU	Project Implementation Unit
RAP	Resettlement Action Plan
CRWSP	Climate Resilient Water Services Project
DED	Design and Estimates Documentation
ESMP	Environmental and Social Management Plan
ACMMP	Asbestos-Containing Materials Management Plan
ESMF	Environmental and Social Management Framework
DDPCSSES	Rayon Disease Prevention Centers and State Sanitary and Epidemiological Surveillance
SanPiN	Sanitary Rules and Regulations
WRS	Water Resources Service
PPE	Personal Protective Equipment
MEDIA	Mass Communication Media
SNiP	Construction Rules and Regulations
SES	Social and Environmental Standards
SEA/SH	Sexual Exploitation and Abuse/Sexual Harassment
SMW	Solid Municipal Waste
PDO	Project Development Objectives

Executive Summary

This Environmental and Social Management Plan (hereinafter - ESMP) for the Muras Subproject Water Supply System Rehabilitation is developed in accordance with the Environmental and Social Management Framework (hereinafter - ESMF), elaborated under the Climate Resilient Water Services Project (hereinafter - CRWSP), financed by the International Development Association.

This ESMP includes procedures and mechanisms for ensuring the requirements of the social and environmental standards of the World Bank (hereinafter - WB), and the legislation of the Kyrgyz Republic in the field of environmental and social environment protection.

This ESMP provides with information about geographical coverage of the project, the current state of the water supply system, the state of environmental and social conditions. Information about the implementation of the project, location and adopted technical solution is also provided. The document contains information about decisions on rehabilitation of the water supply system with a description of the main types of construction works.

One of the ESMP key chapters is the environmental and social impacts of the project and appropriate mitigation measures. In this chapter the types and means of mitigating the project's adverse social and environmental impacts are described.

The types of environmental and social impacts during construction and operation are given in Section 6. This chapter describes the proposed actions and mitigation measures for each environmental and social parameter (soil, water resources, atmospheric air, waste generation, noise impacts, safety and health of workers and communities, etc.) with identification of responsible organizations and individuals.

Chapter 7 was developed to monitor the impact of construction works on the environment and to take appropriate measures, which specifies the parameters and methods of environmental monitoring.

This document describes the following information:

- the potential social and environmental impacts of the project;
- on the current legal framework regulating the protection and use of natural resources;
- public hearings for population in the implementation of the project;
- grievance redress mechanism.

The requirements specified in the ESMP are mandatory for compliance by contractors. The construction contractor shall have dedicated personnel responsible for the implementation of the ESMP during the construction and installation phase. Appropriate PIU specialists will monitor the implementation of mitigation measures and compliance with good practice prescribed by this document, and in case of detection of deficiencies, will notify contractors of the identified issues and require corrective actions to be taken.

ESMP activities will be included in bidding and contract documents, both within construction works and construction supervision.

1. Introduction

The Climate Resilient Water Services Project development objectives are to (i) improve access to water services in selected basins and (ii) improve institutional capacity for climate-resilient water supply and management services at local and national levels.

The project aims to improve - in selected river basins - the coverage, quality and efficiency of water supply, sanitation and irrigation services, as well as capacity building to improve integrated water resources management and the capacity of relevant service providers in the selected basins.

At the national level, the Project will improve the institutional capacity of water resources management in terms of climate resilience. Regarding the first part of the PDO, climate resilient water services are defined as water services that achieve coverage and meet quality standards despite possible climate risks (droughts, high temperatures and extreme heat, urban flooding and wastewater overflows, floods and mudflows).

Investments in infrastructure will also help reduce (a) environmental pollution of Kara-Bulak village; (b) public health risks associated with exposure to untreated wastewater in the event of climate change-induced flooding, and (c) the energy and greenhouse footprint of service provision. These investments will be designed to minimize greenhouse gas emissions by reducing energy consumption by (i) prioritizing gravity flow solutions for irrigation and drinking water supplies, (ii) improving pump efficiency for service delivery, (iii) reducing nitrous oxide emissions, methane and dioxide emissions carbon as well as biological oxygen demand (BOD) through adequate wastewater treatment and sanitation services and (iv) promoting water conservation through water accounting and on-farm activities. Consequently, this component, by its intensity, has an indirect benefit in terms of climate resilience.

The Environmental and Social Management Framework (ESMF) was prepared for the Project in accordance with the requirements of the WB Social and Environmental Standards. Each activity included in the project financing should comply with the environmental and social risks of the subproject and environmental legislation of the Kyrgyz Republic.

This ESMP outlines environmental impacts and mitigation measures related to the rehabilitation of water supply investments in “Kara-Bulak” subproject. ESMP activities will be included in bidding and contract documents as integral part of both construction and technical supervision phases.

2. Legal and Regulatory Framework

The fundamental principles of managing natural resources and the environment in order to ensure favorable conditions for human life, defining responsibility and compensation for damaged caused, are laid down in the Constitution of the Kyrgyz Republic. Kyrgyzstan has developed a legal framework that ensures the ongoing management of natural resources and the environment and regulates the legal relationship between users of nature and the state.

Current legislation regulates the protection and use of all types of resources: land, water, air, biodiversity, mineral resources. Legislation provides procedures and mechanisms for their management, such as: basic norms and rules for resource use, including norms and rules for charging fees for environmental use and pollution, environmental monitoring, impact assessment, environmental standards, environmental expertise, environmental control, etc.

The main laws governing environmental management, environmental protection and the need to conduct Environmental Impact Assessment (EIA) in the Kyrgyz Republic include:

- (i) Law on Environmental Protection (1999);
- (ii) Law on Environmental Expertise (1999);
- (iii) Law on Water (1994);
- (iv) Law on Interstate Use of Water Bodies, Water Resources and Water Management Facilities in the Kyrgyz Republic;
- (v) Law on General Technical Regulation for Ensuring Environmental Safety in the Kyrgyz Republic (2009);
- (vi) Law of the Kyrgyz Republic Technical Regulation on Safety of Drinking Water (2011);
- (vii) Law on Waste of Production and Consumption (2001);
- (viii) Procedure for Production and Consumption Waste Management in the Kyrgyz Republic (Government Resolution No. 559 dated August 5, 2015);
- (ix) Procedure for Hazardous Waste Management in the Kyrgyz Republic (Government Resolution No. 885 sated December 28, 2015)
- (x) Regulations on the Procedure for Environmental Impact Assessment in the Kyrgyz Republic (Government Resolution No. 60 dated February 13, 2015);
- (xi) Regulations on the Procedure for State Environmental Expertise in the Kyrgyz Republic (Government Resolution No. 248 dated May 7, 2014);
- (xii) Other laws regulating the protection and use of natural resources.
- (xiii) Land Code of the Kyrgyz Republic (2 June 1999, No. 45, as last amended on 5 August 2022, No. 85);
- (xiv) Law of the Kyrgyz Republic “On Transfer (Transformation) of Land Plots” (dated 15 July 2013, No. 145);
- (xv) Regulations on Asset Valuation: Asset valuation is carried out based on the Temporary Rules for Valuers and Valuation Companies (Government Resolution No. 537 dated 21 August 2003), Valuation Standards for Valuers (Government Resolution No. 217 dated April 2003.) 3, 2006) and other provisions of national legislation;
- (xvi) Civil Code of the Kyrgyz Republic (8 May 1996, No. 15, as last amended on 15 September 2021, No. 120);
- (xvii) Labor Code of the Kyrgyz Republic (4 August 2004, No. 106 (as amended in 2022));
- (xviii) Law of the Kyrgyz Republic “On Occupational Safety and Health” dated 1 August 2003 No. 167 (as amended in 2016);
- (xix) Law of the Kyrgyz Republic “On Occupational Safety and Health”, 2003;
- (xx) Law of the Kyrgyz Republic “On Local Self-Governance” No. 101 of 15 July 2011 (amended in 2019);
- (xxi) Law of the Kyrgyz Republic “On the Procedure for Consideration of Citizens' Appeals” No. 67 of 4 May 2007 (amended 2016);
- (xxii) Law of the Kyrgyz Republic “On the Rights and Guarantees of Persons with Disabilities” No. 38 of 3 April 2008.

When carrying out construction/rehabilitation works, the Contractor shall comply with all requirements of the Kyrgyz legislation, SNiP, SanPiN, and the requirements of the following social and environmental standards (hereinafter - SES) of the World Bank. Otherwise, the PIU has the right to stop construction work until appropriate corrective action is taken and approved.

The project includes mitigation measures under the following World bank social and environmental standards:

ESS 1: Assessment and Management of Environmental and Social Risks and Impacts

ESS 2: Labor and Working Conditions

ESS 3: Resource Efficiency and Pollution Prevention and Management

ESS 4: Community Health and Safety

ESS 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement

ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources

ESS 8: Cultural Heritage

EES 10: Stakeholder Engagement and Information Disclosure

3. Project Area. General Information.

3.1. Batken Rayon of Batken Oblast

Batken rayon is one of the three rayons of Batken oblast of Kyrgyzstan. The administrative center of the rayon is the town of Batken. Batken rayon is located in the central part of Batken oblast. The northern part of the rayon is located within the southern edge of the Fergana Valley, the rest of the rayon is located in the foothill and mountainous part of the Alay Range. The highest elevation point in the rayon is 5621 m. The rayon borders with Leylek rayon in the west and Kadamzhay rayon of Batken oblast of Kyrgyzstan in the east, with Tadzhikistan in the south and north, and with Uzbekistan (mainly with the Sokh exclave) in the north-east. The Vorukh exclave of Tadzhikistan is also located within the rayon.

The main rivers of Batken rayon are the Sokh (with tributaries Kozho-Ashkan, Archa-Bashy and Ak-Terek) and Isfara (in the middle reaches - Karavshin, with a tributary Kshemysh). There are glacial mountain formations on the territory of the rayon.

Batken rayon includes 9 aiyl aymaks and 47 villages.



Figure 1. Location of Batken rayon

3.2. Environmental and social baseline information for the “Kara-Bulak” subproject

3.2.1. Geographical location

Kara-Bulak village administratively belongs to Kara-Bulak aiyl aymak. The water intake site under study is located in the Kara-Suu gorge in the foothills on the northern spurs of the Turkestan Range. Kara-Bulak village is located 10 km south-east of Batken town and is connected by asphalted and partially unpaved road. From the rayon center of Batken town the site is 12 km away, to the center of Kara-Bulak a/o, Buzhum village - 9 km. The nearest railway station is located in Kyzyl-Kiya at a distance of -140km. According to the terms of reference on the territory of the water intake site will be built the intake structure and the water pipeline route with the length of 14.0 km. Absolute elevations above sea level are 1180m.



Figure 2. Location of Kara-Bulak village

3.2.2. Social and economic characteristics

The population of the village is 3725 people living in 887 households. 99.9% of the population is Kyrgyz, 1 person is Uzbek. Main population activities: livestock, farming, small business. The female half of the village is mainly engaged in housekeeping. Livestock breeding includes:

- Number of cattle –1350
- Small cattle – 3572
- Horses – 201

Labor resources

1.	Working population	206	
2.	Non-working population	1932	
including			
3.	Old-age pensioners	414	
4.	Children under 16 years	685	
5.	People with disabilities	suffering from common diseases	142
		since childhood	10
6.	Unemployed	154	
7.	Registered with the unemployment registration service	18	
8.	Not registered in the unemployment registration service	136	

Source: Village Passport

Migration

Age	2021		2022		2023	
	arrived	departed	arrived	departed	arrived	departed
18-30 years	10	16	17	10	11	8
over 31 years	100	21	24	14	14	17
Total	110	37	41	24	25	25

Source: Village Passport

Land resources

Total area of AA	3599 ha
Agricultural land of which	552 ha
Irrigated	84 ha
Arable	456 ha
Hayland	35 ha
Apple orchards	25 ha
Pastures	1876 ha
Household plot/land, garden	17,740 ha

Source: Village Passport

The following municipal social facilities are located on the territory of Kara-Bulak village:

- general educational institutions - 2 schools;
- preschool institutions - 1 kindergarten;
- rural health post – 1;
- community center – 1;
- museum -1;

3.2.3. Region Climatic Condition Characteristics

Climatic characteristics of the work area is given according to long-term observations of Isfana

meteorological station in Annex No.1. The maximum depth of penetration of zero isotherm is 84cm. Orographic structure of Khodzhabakirgan and Aksu region predetermines the presence of different climatic zones from high-mountainous to typical for Central Asia deserts. Located in the western part of the Fergana Basin, this area differs in general from central Fergana in that it is less humidified, has higher average annual air temperatures and increased wind activity. This zone of steppe and foothill climate is transitional from highland climate to desert type of climate. Changes in meteorological conditions take place here as the altitude of the terrain decreases.

Climatic characteristics of Isfana meteorological station (absolute elevation 1180 m).

Location characteristics of the station site: the station is located in the foothill zone of the northern slope of the Turkestan Range extending in latitudinal direction. The terrain is strongly cut by gullies and ravines. The site is located on the upper right bank terrace of the Isfanasy River, in the eastern part of Isfana. (Annex1).

Average outdoor air temperature by month, MTS Isfana t°C

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Year
-4,0	-1,4	4,2	9,8	14,9	19,0	21,8	20,1	15,3	9,0	9,6	-0,2	

Outdoor air water vapor tension by month, hPa

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
3,3	4,0	5,8	8,2	10,2	11,4	12,0	10,9	8,2	6,1	4,5	3,7

- Average annual outdoor temperature 9,3°C;
- Absolute minimum air temperature - 28°C;
- Absolute maximum air temperature 37°C;
- The calculated temperature of the coldest 5 days - 13°C;
- Average temperature of the coldest period (ventilation) -7°C;

In the western part of the northern slopes of the Turkestan Range, precipitation varies from 300-800 mm and has a different intra-annual distribution.

The low-altitude zone of the leading ranges is characterized by an increase in precipitation during March-May months, low values in July-September and average amounts during winter and autumn.

Average multiyear precipitation amounts for Isfana MTS (1180 m) (monthly for the year, warm and cold periods) mm.

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Year	IV-IX	X-III
24	34	64	80	68	29	13	11	2	21	29	18	393	203	190

As can be seen from the above data, the annual course of precipitation in the area is marked by extreme irregularity and small amount of precipitation per year. The greatest amount of precipitation falls in March-May, the least in August-September. The average number of days per year with precipitation varies from 50-60 days on the plain to 80-90 days in the foothills. The weight of snow cover per 1 m² of horizontal ground surface (average value of annual maximum water storage) is 28 kgf/m².

3.2.4. Biodiversity

Vegetation. The vegetation is mainly represented by trees (american elm, white poplar, umbrella plant, common privet and many others) planted along the road and flowers. No plants listed in the Red Book of the K.R. were found on the construction territory. The first fresh fruits and vegetables after winter are brought from here. Wheat, potatoes, onions, garlic, cotton, rice and fruit plantations are mainly planted. There is not a free piece of land here, everything is sown.

Fauna. The animal world is represented mainly by birds: sparrows, pigeons, thrushes, swifts, tits, crows, jackdaws, etc. Also represented by a small list of mammals: bats, rodents (house mouse, grey hamster, rats, etc.).

The construction site is located in the residential sector, which determines the presence of synanthropic animal species. No species listed in the Red Book of Kyrgyz Republic were found on the construction site or the adjacent territories.

3.2.5. Relief and geomorphological characteristics

In geomorphologic terms, the water intake site is located in the peripheral part of the Kara-Suu River fan, represented by a wide gorge, with a general surface slope to the north-west. The relief is mostly gentle, quiet, and in the southern part is strongly rugged.

There are mainly 2 springs coming out of the water intake area located at a distance of 6 m from each other. Spring No.1 is wedging out from under fractured limestone. The spring is of descending type. The flow rate of spring No.1 at the time of survey was about 9 l/s. Water-bearing soils are large pebble deposits with boulders up to 30% and fractured weathered limestone. The soil group on difficulty of manual excavation for fractured limestone is V, for pebble soil - IV and V (SNiP IV-5-82).

Spring No. 2 is located at a distance of 6 meters north of spring No. 1, it is wedging out under large huge boulders, the spring is of descending type, the flow rate was about 5 l/sec. To the north of the water intake area, several other small springs are wedging out. The outlet is scattered and partially swamped.

3.2.6. Geological and lithological characteristics

The geological structure involves deluvial-proluvial deposits of Upper Quaternary-modern age (dp Q_{iii-iy}). The surface of the pipeline route is dissected by numerous temporarily active watercourses. (see the route plan). The relief of the reservoir site and the water pipeline route is slightly undulating.

The hydrographic network is represented by irrigation ditches (flumes) and canals of local importance, originating from the Kara-Suu River and temporary-acting watercourses of mudflow character. Irrigation of fields and household lands is carried out at the expense of water from the Kara-Suu River.

In the geological structure of the site of the projected territory take part deluvial-proluvial deposit of the upper Quaternary-modern age dp Q_{iii-iy} , represented in the main loam with gravel and pebble soils with sandy loam filler, with boulders up to 20%, covered with a top soil and vegetation layer and in some places filled soils with a thickness of 0.30 m.

The topsoil is represented by sierozem loam, slightly humusified with thickness up to 0.30 m. The loam is pale-coloured, lumpy; near temporarily active watercourses, lenticular interlayers of pebbles with sandy loam filler are observed in the loam. The thickness of the loam varies from 0.40 to 0.90 m (see geocolumns of excavations). Pebble soils with sandy-loamy aggregate with boulders up to 20% lie everywhere below the loam. The gravels were discovered at the bottom of temporarily active watercourses. The fragments are well rounded, of various sizes, with medium-sized particles predominating. The perographic composition of fragments is represented by sedimentary rocks (limestone, sandstone). The thickness of the gravelly soil is more than 3 m.

3.2.7. Hydrogeological conditions and prediction of area flooding

From the above described geological structure it is clear that the basis of the designed structures will be mainly sandy loam and gravelly soils. The design load can be assumed for loam - 2.0 kgf/cm², for pebble soil - 4.5 kgf/cm². The soil group on difficulty of manual excavation for sandy loam - II, for pebble soil - IV (SNiP IV-5-82).

Groundwater occurs at depths 5 m from the ground surface. In the water intake area, it comes out straight to the surface. Groundwater at the reservoir site is below 10 meters.

The soil resistance varies from 18.0 to 26 ohm, with an average of 21 ohm. The specific soil resistance of

soils is 165-188 ohm, with an average value of 177 ohm. Soil corrosion activity in relation to carbon steel according to GOST 9.015-74 is low. (According to archive data).

Physico-geological processes are observed in the form of mudflows on the eastern and southern side of the site during heavy precipitation events. No regime observations of mudflows are conducted. Therefore, when designing the construction of the water pipeline route, it is necessary to provide for appropriate mudflow diversion measures at the sai crossings. Since there is no possibility to unite all mudflows into one channel, it is necessary to straighten and deepen the channel of temporarily active watercourses from 1.0 m to 2.0 m and direct it towards the Kara-Suu River bed. It is necessary to reinforce the banks of sais with forest plantations and stones, boulders.

Due to favourable engineering-geological and hydrogeological conditions according to p.3.107 "Guidelines for Design of Buildings and Structures" the investigated territory of the water pipeline route site is classified as not flooded by groundwater, the water intake site is classified as flooded by groundwater. It is necessary to provide for the maximum preservation of green spaces, as well as the preservation of fertile topsoil for future use.

3.2.8. Seismicity

Soil category by seismic properties according to SNiP KR 20-02:2009 -II, III. Initial seismicity of the work area according to SNiP KR 20-02:2009 is 9 points. Seismicity according to SN CR 20-02:2018, Table G-1, is 9 points. Soil conditions type by seismic properties II (pebble soil, sandy loam). Peak acceleration $a_{gR}=0.49$ (in fractions of g).

3.2.9. Archaeological and Cultural Monuments Characteristics

No archaeological monuments or finds were found in the area of interest. If artefacts and other signs of historical and cultural heritage materials, as well as fossils are found, it is necessary to stop all construction works and report the findings to the local government, the department of the Ministry of Culture, Information, Sports and Youth Policy responsible for the protection of cultural heritage and archaeological specialists. The subproject will not affect cultural and national heritage sites.

3.2.10. Existing Water Supply System

The existing water supply system of Kara-Bulak village was constructed in 1990 and in 2006 an additional 4500 m of water supply network was constructed. The water supply of the village is currently provided from the intake structure. Water supply networks of the village are made of asbestos-cement and steel pipes. The pipelines are damaged by corrosion, which is especially related to the steel sections of the pipelines (diameter of pipelines: 40, 50, 100, 150). Depreciation of water supply networks is 80%.

There is a sanitary protection zone, partial repair of fences and gates is required. There is a transformer substation TP10/0.4kV to provide lighting on the site. The existing water supply network of the village is made of cast iron and steel polyethylene pipes with a diameter of 100 mm, and is currently partially operational. There are also wells and standpipes, but all of them are broken. Due to the lack of irrigation network, many household lands are irrigated with water from the canal through the reservoir and for household and drinking needs.

4. [Scope of Works and Identification of Related Environmental and Social Impact Assessment](#)

4.1. Scope of the Works

The project envisages a combined domestic and fire water supply system. The networks are designed to be looped in order to ensure a constant pressure in the network and to prevent dead ends. Non-metallic pipes from d75 to 160 mm are envisaged. The water intake site is located in the peripheral part of the Kara-Suu River fan, represented by a wide gorge, with a general surface slope to the north-west. The designed water intake is intended to collect calculated flow rate at any fluctuation of spring flow. The water intake consists of two compartments with filter layers and from a prefabricated collecting well. 1/3

part of the pipe is arranged with a filter fill acting as a return filter. Water is supplied from the water intake to the storage tank.

The project envisages repair of the existing reservoir of 300 m³ capacity 2 pcs.

The adopted water supply scheme includes the following buildings and structures:

1. the existing intake structure and the designed one;
2. the existing reservoir with a capacity of 500 m³ - 2 pcs.;
3. chlorinator room, designed;
4. guard/watch house - 1 pc.;
5. toilet for 1 point - 1 pc.

The village water supply system source is spring water: the project envisages the designed intake structure and rehabilitation of the existing one. The water intake site is located above the village at 4.825 km, the total flow rate of springs is 15 l/sec. The calculated maximum capacity of the village water intake is 15 l/sec. Water pipeline No. 1 connects the reservoir switching chamber to the collection well of the intake structure. The length of water pipeline No.1 is 4 825 m.

The water distribution network is designed along all existing streets of the village. The network is looped and water supply wells with fire hydrant, regulating gate valves are installed on the network, and for future connection of consumers, crosses with water points are provided in the wells.

The water is disinfected by a chlorinator prior to supply to the village. From the reservoirs/tanks, water is supplied by conduits to the water distribution network of the village. The village's water supply network is made of polyethylene pipes: PE100 SDR-17 od 225x13,4 mm L=2429 m; od 160x9,5 mm L=6445 m; D=110x6,6 mm L=18315 m; D=75x4,5 mm L=7774 m;

Water supply wells with all necessary pipe fittings, fire hydrants and water meters are installed on the network. Two types of distribution units, threaded and welded, are installed in each well for water distribution.

Fire hydrants are provided on the water line to provide external fire extinguishing. Water consumption for fire extinguishing is not included in the calculated daily water consumption. This flow rate is provided in the form of a reserve in clean water tanks for the total three-hour duration of firefighting. The water supply network checked by calculation for supplying the flow rate for firefighting, coinciding with the hour of maximum water consumption for household and drinking needs.

The location of the fire hydrant is indicated by signs on the walls of the nearest houses in accordance with GOST 12.4.009-75 "Fire equipment for protection of objects. General requirements". The signs are made and placed in coordination with the local fire supervision authority by the forces and means of the population and economic organizations using the water supply system.

There are 293 water supply wells with 6 connections on the village water supply network.

Courtyard inlets are designed from polyethylene pipes Ø15 mm with ball valves and plugs. Connection of households is carried out to the distribution network at the expense of homeowners. In the places of connection to the distribution network wells are installed with stop valves for 6 connection houses.

In low-lying sections of the network, wells are provided with outlets for emptying the system through a flexible pipe to the terrain.



Figure 3. Distribution network diagram of the village of Kara-Bulak.

Land Status

A land plot has been allocated for the construction of the water supply system in accordance with the Land Code of the Kyrgyz Republic. The land status is municipal property. The ayyl okmotu has prepared all the relevant title documents:

1. for a water intake area of 1.26 hectares, there is a state act series B No. 058981 dated 10/09/2024.



Figure 4. Copy of the State Act of the construction site of the WSS.

Operation phase

After completion of construction work, operational activities will be carried out by the Municipal Water Supply Enterprise. As part of the project, training will be conducted for the operating organization. Repair and maintenance of the system will be the responsibility of the Municipal Water Supply Enterprise.

4.2. Environmental and Social Impact

The subproject's activities were also reviewed for compliance with the World Bank criteria and exclusion from the project. The planned work for the Kara-Bulak subproject is not included in the exclusion list. At the design stage, the PIU conducted environmental and social screening (Annexes 1, 2). Thus, the Kara-Bulak subproject was assigned the category "moderate".

4.2.1. Environmental Risks

Construction stage

During the construction period, potential environmental issues associated with small/medium scale activities for local communities will be limited and include temporary inconvenience from ongoing construction activities and may include: (i) increased pollution due to construction debris, (ii) generation of dust, noise and vibration due to operation, movement and maintenance of construction machinery and vehicles, (iii) associated risks due to inappropriate disposal of construction debris, and asbestos-containing material, or small operational or accidental spills of fuel and lubricants from construction machinery on soil and water resources, (iv) inadequate restoration of construction sites upon completion of the works.

Such potential environmental impact is quickly identified, insignificant in magnitude and minimal in terms of impact, and can be effectively avoided, minimized or mitigated by including specific measures in construction contracts for implementation by contractors, with strong supervision and control by the PIU.

The use of construction materials that are hazardous to human health (e.g. asbestos containing materials) is prohibited. Asbestos containing wastes will be collected, removed, and ultimately disposed of in a special protective manner, in accordance with established hazardous materials disposal standards in municipal solid waste landfill.

An Environmental and Social Management Plan (Table 1) and an Environmental Monitoring Plan (Section 7) was developed to mitigate impacts during the construction period. The costs of environmental impact mitigation and monitoring works will be envisaged during the development of design and estimate documentation (DED) and will be taken into account when submitting tender documents. During implementation of activities, the PIU will have overall responsibility for supervision to ensure that the measures specified in the ESMP are properly implemented. The PIU in cooperation with the Kara-Bulak village local authorities and the Regional Office of the Ministry of Natural Resources and Technical Supervision in Batken oblast shall carry out environmental monitoring of activities during the construction and operation stages.

The subproject will not support activities that have an impact on natural habitats or protected areas. Also, no funding will be provided for activities that may cause substantial loss or degradation of significant areas of natural habitat.

Operational stage

Some negative impacts are possible during the operational stage: leaks in the water supply system, discharge of water when flushing water pipes; possible impact on people working directly with chlorine; contamination of groundwater in the absence of effective wastewater treatment and discharge of untreated water into the territory; possible increase in water tariffs.

4.2.2. Social Risks

- possible work-related injuries to workers;

- potential public safety issues due to construction work on the village streets;
- restrictions on land use as a result of construction activities (i.e., access to private properties);
- unauthorized access of the local communities to the operational sites;
- community dissatisfaction with the failure of existing communications;
- low involvement of women in the project;
- problems with household connections of the poor (low-income population);
- possible social resistance against tariff increases;
- limited capacity of local governments;
- actual delays in project implementation;
- change in behavior and water consumption practices.

Measures to mitigate these risks, institutional responsibility for implementing the measures, and monitoring are described in the Social Environment section.

No major social risks are expected in this subproject. The activities planned under the subproject will have mostly positive social impacts.

An integral part of the strategy is informing and taking into account the views of communities and people affected by the project. Thus, one of the main tools for preventing social risks/conflicts is the Grievance Redress Mechanism, through which information is exchanged and community opinions are taken into account at all stages of the project. Below is complete information regarding GRM.

The mechanism for addressing complaints/appeals of citizens affected during the Project implementation period and providing appropriate responses on social and environmental safeguards and gender issues will be implemented according to the following three levels, i.e. Grievance Commissions will be established at all levels:

- at the subproject level;
- at the local level (AO);
- at the national level (SIWSWD).

Within the framework of effective project implementation, including activities on GRM, the PIU establishes a Village Water Committee (VWC) at the subproject level, consisting of representatives of ayil okmotu, ayil kenesh, elders' council, women council, youth council, vulnerable category of population, ethnic minorities, municipal water enterprise, as well as interested residents of the village. The main purpose of establishing and interacting with the VWC is to facilitate the Project to broadly involve rural residents in the process of addressing the village water supply and sanitation issues, as well as in:

- dissemination among the rural residents of reliable information on the progress of the project on construction/rehabilitation of the WSS and modernization of sanitary facilities of social institutions;
- assistance in increasing transparency and openness in the process of implementation of the Project activities;
- conducting joint monitoring of activities of ayil okmotu and municipal water enterprise on water supply system management and provision of safe drinking water to the population.

Establishment of the Village Water Committee (VWC) at the subproject level is carried out at the introductory meeting of the village, where information on the Project, agreement on the composition of the VWC and the adopted Regulation on the VWC are provided, which are all together recorded in the Minutes of the general introductory meeting of the village. At the first meeting of the VWC, a chairperson, a secretary and a person responsible for promotion of the GRM in the subproject are elected.

- Head of Ayil Okmotu is the Chairman of the Commission;
- Chairperson of Ayil Kenesh - co-Chairperson of the Commission;
- Representative of Regional Branch of the Cadastre State Enterprise (upon confirming);

- Representative of the Territorial Administration of the Ministry of Natural Resources, Ecology and Technical Supervision of the Kyrgyz Republic (upon confirming);
- Representative of the Rayon Center of Disease Prevention and State Sanitary and Epidemiological Surveillance of the Ministry of Health of the Kyrgyz Republic (upon confirming);
- Director of Municipal Water Supply Enterprise;
- Subproject VWC Chairman;
- Rural resident (upon confirming);
- The PIU subproject representative.

Относительно Комиссии по рассмотрению обращений граждан на национальном уровне в рамках действующего Проекта ОПП ГУРПБВ создана данная Комиссия на основании Приказа ГААСЖКХ № 27/П от 09.11.2023 г.

The national commission is composed of:

- Director of the State Institution for Development of Drinking Water Supply and Wastewater Disposal (SIWSWD) under the Water Resources Services (WRS) is the Chairman of the Commission for consideration of citizens' appeals);
- Head of the Department of Drinking Water and Wastewater Disposal of the SIWSWD is the co-chair of the Commission;
- Representative of the State Civil Service Agency and Local Government;
- Representative of the Department of the Ministry of Natural Resources, Ecology and Technical Supervision of the Kyrgyz Republic;
- Representative of the Department of Disease Prevention and state sanitary and epidemiological supervision of the Ministry of Health and Social Development of the Ministry of Health of the Kyrgyz Republic;
- The PIU Director;
- The PIU Environmental Specialist;
- The PIU Social Safeguards Specialist;

In Table 2 provided the Matrix for managing appeals/complaints from citizens affected by the Project.

In addition to information provision, the PIU will cooperate with aiyl okmotu and local community organizations involved in dispute resolution, such as aksakals (Elder's) courts controlled by AO.

4.2.3. Involuntary resettlement.

Land acquisition and resettlement issues fall under the WB ESS5 "Land Acquisition, Restrictions on Land Use and Involuntary Resettlement". With regard to involuntary resettlement, no impacts have been identified that may result in land acquisition, restrictions on economic activities, or physical resettlement.

A resettlement framework document, the Resettlement Policy Framework (RPF), has been developed for the project. The framework document was made publicly available to the target community, through public hearings and published on www.tunuksuu.kg. The RPF guides the preparation of Resettlement Action Plans (RAPs) during project implementation.

In case of land acquisition, resettlement or damage to community assets, a Resettlement Action Plan will be prepared in accordance with the RPF.

According to design decisions, during construction, private lands will not be affected, all distribution networks, water pipelines will be laid by municipal participants; there will not be restrictions on land use (easement).

5. Proposed mitigation measures

All work shall be performed only after the necessary permits and approvals are obtained.

Organizational Measures. Before starting construction work, local construction supervision and environmental protection inspections and the public shall be informed about the forthcoming activities through mass media and/or at sites open for public access (including works sites) by disclosing site-specific ESMPs for each subproject. All activities required for the implementation of environmental and social safeguards and monitoring shall be planned and budgeted in the work plans of the Employer, contractors and subcontractors. All work shall be performed in a safe and disciplined manner that minimizes impact on the public and the environment.

Air pollution control and dust minimization. During construction activities, waste should be stored in a controlled area and sprayed with water to reduce dust generation. Open burning of construction and household waste is not allowed at the site. When transporting any dust-forming materials to the rehabilitation site, the materials must be covered. Dust generation at the rehabilitation site in dry seasons can be minimized by frequent watering the ground, while in hot seasons, it is necessary to spray water on the roads along the excavated trenches at least four times a day.

Prevention of soil and water contamination. Maintenance and refueling of construction machinery and equipment shall be performed at service centers located at the maximum possible distance from the work site. If this work is performed on-site, provide an impervious surface for refueling and have a supply of absorbents available in case of an accidental spill. Next, it is necessary to constantly inspect machinery and equipment in order to identify and eliminate malfunctions, as well as maintain mechanical equipment, tools and devices in order to prevent soil and water contamination. Car washing should be prohibited near surface water bodies. Used motor vehicle oil, fuel and lubricant supplies and other hazardous substances should also be stored on an impervious surface, preferably under cover, and should be protected from fire. Where workers' accommodation is located in construction camps, septic tanks or pit latrines shall be provided, and their operation shall not allow direct discharge of water into surface water bodies or degradation of sanitary conditions.

Waste Management and Recycling. Waste should be minimized, segregated and handled appropriately, where possible. Open air burning and illegal dumping of any waste is strictly prohibited. Non-hazardous waste, as well as waste containing asbestos, will be disposed of at designated landfills as per ACM Management Plan. Excess excavated soil will be returned to officially designated areas. The contractor must obtain permission from the local authorities to remove the waste. Construction equipment and machinery should be maintained at dedicated place at the construction camp. Worn tires, filters and waste oil shall be disposed by the licensed company based on transfer agreement. Containers with lids shall be installed for the collection of household waste. The issue of regular household waste removal should be coordinated with local authorities.

Disposal of dismantled asphalt. During construction, the head of the aiyi okmotu will provide a landfill for the disposal of dismantled asphalt; in the absence of a landfill, the asphalt will be transferred for processing to an asphalt production organization.

Asbestos-Containing Materials Management. During water system rehabilitation, the existing asbestos cement pipes will not be removed; it will be possible to leave existing pipelines in the ground as much as possible. The new water lines will be located parallel to the existing water mains. In cases where existing asbestos-cement pipelines are dismantled, waste asbestos-containing materials will be collected, removed and completely disposed of using special protective measures in accordance with hazardous waste management standards.

The contractor shall develop an Asbestos-Containing Waste Management Plan (an example plan is given in Annex 4). Sanitary norms and rules No. 2.2.3.013-03 "Work with asbestos and asbestos-containing materials" must be observed when working with asbestos-containing waste. Asbestos-containing materials must be disposed of in authorized municipal landfills.

Tree Felling/Cutting Down. During construction of water supply networks, trees and shrubs may be cut down. No mass cutting is envisaged under this subproject, only single cases. Before starting construction

work, inventory of green areas along the route of the planned water pipeline should be carried out to identify those to be cut down. The cutting of trees on the municipality's balance sheet will take place only in the presence of appropriate permits, taking into account compensation measures of cut green spaces in the ratio of 1:3. In the case of private tree felling, a RAP will be prepared in accordance with the WB ESS5. If trees of several owners are felled, one RAP can be prepared for a subproject.

Child labor. Child labor and forced labor shall not be used in the subproject. The contractor shall make a commitment against the use of child and forced labor, implement mitigation measures against gender-based violence, and the PIU staff responsible for supervising the contractor will monitor and report on the absence of forced labor. The minimum age for admission to work is over 18 years of age due to the nature of the risk.

Safety and health of workers during construction works. Construction workers must wear personal protective equipment (hereinafter referred to as PPE): safety helmets, safety glasses, safety harnesses (belts) and safety shoes. Before starting construction work, workers shall be trained/instructed on the labor safety rules at the project sites. Further, it is necessary to conduct constant inspection of machinery and equipment in order to identify and eliminate malfunctions, to observe equipment repair periods, to train and instruct workers who perform maintenance of mechanical equipment, tools and devices in safe methods and means of work. It is prohibited to: give defective or untested tools for work, as well as leave unattended mechanical tools connected to the electrical network or to compressed air hoses; pull out and twist cables and air hoses; cables and hoses must not intersect with wire ropes, electrical cables; it is prohibited to hold rotating elements of mechanized tools. The applicable national regulations on the safe operation of cranes/earthmoving machines and welding work must be strictly observed.

Procedures in case of accidental finds. Before starting construction work, the PIU shall instruct the contractor's working personnel in case cultural and historical objects are found. If a "chance finds" is discovered during excavation, the contractor shall implement the Chance find Procedure including immediately stopping all physical work on the site and notifying the PIU. The PIU should forward the information to the Ministry of Culture, Information, Sports and Youth Policy of the Kyrgyz Republic and suspend the work until written notification is received from the Ministry with permission to restart the work.

Decision on the matter of disturbance to local communities. Local communities should be notified of the timing and scope of the planned works. Working hours should be strictly limited to daytime (08:00 to 18:00) on weekdays and the area should be sprayed with water to prevent dust generation. Temporary storage of construction materials and debris shall be done in the subproject area, parking of construction machinery shall not block or restrict access of local residents to their property and public areas or, if unavoidable, alternative temporary access routes shall be organized. Waste and material storage areas, work camps and access roads shall be identified by the Project works and clearly marked. All project employees shall comply with the Code of Conduct (Annex 3).

The following risk management and mitigation measures are required during the operational phase.

- Use of environmentally acceptable fuel.
- Regular maintenance (system warranty period is 12 months)
- Ensure that all warranties and certificates are obtained in accordance with fire safety requirements and emission/air concentration monitoring.
- Ensure correct and efficient use of water resources and prevent water losses, leaks and excessive water consumption - install, operate and periodically check water meters at water consumers.
- In the event of a leak, the operator must shut off the water supply, determine the location and nature of the fault, and then carry out repair work.
- Component 3 includes the procurement of equipment for operation and maintenance, as well as training in the operation of the system.
- When flushing the water mains, water will be discharged into irrigation canals.

- The contractor will develop instructions for the maintenance of the water supply system, including instructions for working with chlorine (or calcium hypochlorite or any other chemicals).
- The project will include training and information work.
- Proper control over the operation and efficiency of local treatment facilities.
- Regular monitoring of the efficiency of treatment facilities.
- Obtaining permission for water use in accordance with the requirements of the legislation of Kyrgyzstan.
- Timely cleaning of the outdoor toilet to be used as needed.

The table below lists the responsible parties and their associated activities.

Table 1. Responsible parties

Responsible site	Description of duties
Aiyl Okmotu	On a weekly basis, conducts working planning meetings with the participation of representatives of contractors, the municipal water supply company and regional project specialists in order to discuss and agree of a plan for civil works in certain areas of the village. Based on the results of joint planning of civil works, the Aiyl Okmotu, through its quarterly employees, informs the population about upcoming civil works in their area.
Contracting company	According to the Civil Works schedule, installs information boards and road signs at construction sites in order to regulate the movement of vehicles and the local population. Conducts daily briefings among its workers on occupational health and safety issues and Code of Conduct during the construction works in the subproject. Take action to accelerate disturbance to the local community during the civil works.
PIU CRWSP	Distribution of information to the local population about upcoming civil works schedules of contractors via WhatsApp messenger. The PIU technical supervision engineers and regional specialists on institutional development provide support and control in the organization of the abovementioned activities in the subproject.
Village Water Committee	Receives requests and complaints from the population regarding construction work of the water supply system and, together with regional specialists of the PIU project, discusses and makes decisions at the local level. Assists the PIU in the timely dissemination of information about the project activities in the subproject.

6. Environmental and Social Impact Mitigation Plan.

Environmental and Social Elements	Impacts and Risks	Proposed Environmental Impact Mitigation Measures	Cost of Mitigation Measures	Institutional Responsibility for the Implementation of Measures
Construction Period				
Physical Environment				
Noise and Vibration	<p>During construction works the sources of non-permanent noise and vibration are operating mechanisms (engines) of construction machinery and equipment. There may also be temporary increases in noise and vibration levels along material supply routes.</p>	<ul style="list-style-type: none"> • No noise protection measures are foreseen, the machinery and equipment will be equipped with silencers. • Use of vibration devices that comply with standards, as well as vibration and noise protection devices. • Machinery and equipment will only work from 8 a.m. to 6 p.m., no work will be done at night or weekends. • During work, the engine covers of generators, air compressors and other drive mechanisms should be closed; the equipment should be located as far away from residential premises as possible. • Avoid the use of worn-out vehicles or heavy machinery producing significant noise and air emissions 	<p>Criteria /specifications to be incorporated into bidding and contract documents.</p> <p>It is not considered as a separate cost item</p>	<ol style="list-style-type: none"> 1. The Contractor shall be responsible for implementation of environmental and social mitigation measures. 2. PIU Technical Supervision Engineer / Technical Supervision Company will provide overall supervision of the construction site, including monitoring of potential environmental and social risks. 3. PIU Environmental Specialist, Social Development Specialist and Infrastructure Engineer are responsible for overall supervision. 4. State control will be carried out by the authorized state body
Soil Pollution	<p>Soil and water contamination during leak detection; water contamination with fuel oil from the use of machinery During the construction period, impacts are accompanied by the following type of work:</p>	<ul style="list-style-type: none"> • Ensure proper selection of areas for construction site location, where SDW collection and safe toilets (possibly bio-toilets) should be provided. • Timely cleaning of territories from fuel oil in case of their contact with the soil • No washing of machinery and equipment in the construction area • Fueling of machinery will be carried out at specialized fuel stations 	<p>It is not considered as a separate cost item</p>	<ol style="list-style-type: none"> 1. The Contractor shall be responsible for implementation of environmental and social mitigation measures. 2. PIU Technical Supervision Engineer / Technical Supervision Company will provide overall supervision of

	<p>-earthworks: soil excavation, embankment, backfilling, levelling; -operation of construction machinery. -waste formation.</p>	<ul style="list-style-type: none"> • Vehicles with a defective fuel system exceeding the exhaust gas toxicity standards and hydraulic systems shall not be permitted. • Use of vehicles that have passed technical inspection • No storage and stockpiling of fuel and lubricants and construction materials is allowed to prevent pollution from entering the river • Daily inspections of machinery and equipment for oil leaks 		<p>the construction site, including monitoring of potential environmental and social risks.</p> <ol style="list-style-type: none"> 3. PIU Environmental Specialist, Social Development Specialist and Infrastructure Engineer are responsible for overall supervision. 4. State control will be carried out by the authorized state body
		<ul style="list-style-type: none"> • Topsoil Removal Improvement of the territory in accordance with the project. 	It is considered as a separate cost item in the EP BoQ.	
Atmospheric Air (dust pollution)	<p>Dusting during reconstruction work will be minor and temporary. Air pollutant emissions are expected: - from motor vehicles (machinery) -during road leveling -when using electrical welding</p>	<ul style="list-style-type: none"> • Dust suppression measures and appropriate household activities such as spraying water to prevent dust and use of curtains, and construction site fencing. • Use of masks, gloves and protective clothing. • Limit vehicle speeds and select appropriate transportation routes to minimize exposure to dust-sensitive receptors. • Equip vehicles transporting bulk materials with removable tents. Cement is delivered to construction sites only in pre-packed hermetically sealed bags. • The above machinery is ordered only for the period of specific operations and is not permanently located at the construction site. • Vehicles with a defective fuel system exceeding the exhaust gas toxicity standards shall not be permitted. • It is prohibited to burn construction and household waste on the work site. • Keep the surrounding area clean and free from construction debris to minimize dust and contamination. • Organization of proper storage and transportation of flammable and hazardous materials (gas cylinders, bituminous materials, paints, solvents, glass and 	Water irrigation of unpaved roads (wet dust suppression of on-site roads and sites) is considered as a separate cost item in the EP BoQ.	<ol style="list-style-type: none"> 1. The Contractor shall be responsible for implementation of environmental and social mitigation measures. 2. PIU Technical Supervision Engineer / Technical Supervision Company will provide overall supervision of the construction site, including monitoring of potential environmental and social risks. 3. PIU Environmental Specialist, Social Development Specialist and Infrastructure Engineer are responsible for overall supervision. 4. State control will be carried out by the authorized state body

		rockwool). It should be noted that the construction of facilities will not take place in parallel, but in stages and sequentially, from one facility to another.		
	Use of calcium hypochlorite (chlorine)	<ul style="list-style-type: none"> • During construction work, chlorine is not expected to be handled, so exposure is avoided. During operational period, it is possible for people working directly with chlorine (in the working area) to be exposed. Resolution of the Kyrgyz Republic dated 29.10.2019 No. 576 "On Approval of the Safety Rules for Handling Strong Poisonous Substances in the Kyrgyz Republic" 	It is not considered as a separate cost item	
Water resources	Pollution of ground and surface waters, flooding and erosion of soil	<ul style="list-style-type: none"> • Do not allow spills/leaks of fuel oil into the ground, in case of inadvertent spills remove contaminated soil and transport to appropriate locations. • Timely cleaning of areas from fuel oil in order to prevent their entry into local water courses and groundwater together with atmospheric precipitation. • Vehicles with a defective fuel system exceeding the exhaust gas toxicity standards and hydraulic systems shall not be permitted. • Cleaning of outdoor toilet pit from liquid waste and its removal to the municipal treatment facilities according to the Removal Act • No excavation near groundwater sources. • Work areas with machinery, concrete mixers and fuel tanks should be located outside of water protection zones. • Installation of special pallets and other prefabricated equipment in places of possible leaks and spills of fuel and lubricants, technical solutions • Disinfection of pit toilet and filling with soil in accordance with building regulations. 	It is not considered as a separate cost item	
Construction waste	Contamination of adjacent territories, soil and water resources	<ul style="list-style-type: none"> • Before the start of works, to sign an agreement with the local municipality for disposal of construction and household waste at the municipal landfill. • Determination of methods of waste collection and disposal prior to the commencement of work, as well 	It is not considered as a separate cost item	

		<p>as locations for the main types of waste generated during demolition and construction work</p> <ul style="list-style-type: none"> • Mineral waste from construction works and waste generated during dismantling of facilities shall be separated from organic, liquid and chemical wastes at the work site, after which they shall be stored at a proper site • All records and documentation of waste removal and disposal should be properly maintained as evidence of proper waste management practices on site as designed • Recycling of inert material waste (except asbestos) is allowed whenever possible • Construction waste shall be removed at the contractor's expense to the storage sites. 		
	Dismantled asphalt	<ul style="list-style-type: none"> • During construction, the head of the aiyl okmotu will provide a landfill for the disposal of dismantled asphalt; in the absence of a landfill, the asphalt will be transferred for processing to an asphalt production organization 	It is considered as a separate cost item in the EP BoQ.	
Asbestos-containing materials	Pollution of the adjacent territory and negative impact on the human body	<ul style="list-style-type: none"> • Some construction debris may contain asbestos. The Contractor shall train its employees to assess the presence of asbestos-containing materials and determine procedures for safe disposal of asbestos using appropriate protective equipment, storage in sealed containers. Safety requirements for asbestos management are specified in Annex 4. • Asbestos should be handled and disposed of by qualified and experienced specialists using proper protection (masks, gloves and overalls). • Before removal (if removal is necessary), the asbestos will be treated with a wetting agent to minimize the generation of asbestos dust. • Asbestos-containing materials shall not be subjected to breaking or cutting. • Workers should avoid crushing/destruction of asbestos waste and dispose of it in an organized 	It is considered as a separate cost item in the EP BoQ.	<ol style="list-style-type: none"> 1. The contractor shall develop an Asbestos-containing Waste Management Plan 2. PIU Technical Supervision Engineer / Technical Supervision Company will provide overall supervision of the construction site, including monitoring of potential environmental and social risks. 3. PIU Environmental Specialist, Social Development Specialist and Infrastructure Engineer are responsible for overall supervision. 4. State control will be carried out by the authorized state

		<p>manner at construction sites with subsequent removal to designated areas or burial.</p> <ul style="list-style-type: none"> • If asbestos material is to be temporarily stored, its waste must be securely isolated in closed containers and labeled as hazardous material. • Hazardous waste transportation to landfills is carried out by specially equipped own transport of the enterprise or specialized transport companies. • Transportation of unpackaged asbestos in open bodies of vehicles is not allowed. • ACM should be safely disposed of at a local hazardous waste landfill, if available, or at a municipal landfill after prior arrangements have been made with the landfill operator for safe storage. 		body
Vehicles	Local air pollution, terrain; Hazard when moving around in a populated area; Hazard when maneuvering	<ul style="list-style-type: none"> • Authorization of technically serviceable vehicles for operation • Observance of speed limits • Vehicle complete set is: medical kit; fire extinguisher; emergency stop sign or flashing red light; wheel stops (at least two). • Sound the horn when reversing • Open parking areas shall have markings identifying parking spaces and driveways. 	It is not considered as a separate cost item	<ol style="list-style-type: none"> 1. The Contractor shall be responsible for implementation of environmental and social mitigation measures. 2. PIU Technical Supervision Engineer / Technical Supervision Company will provide overall supervision of the construction site, including monitoring of potential environmental and social risks. 3. PIU Environmental Specialist, Social Development Specialist and Infrastructure Engineer are responsible for overall supervision. 4. State control will be carried out by the authorized state body
	Littering of adjacent property; Restriction of free movement of pedestrians and vehicles	<ul style="list-style-type: none"> • Temporary storage of construction materials and debris shall be organized in the subproject area; • Parking of construction machinery and shall not obstruct or restrict local residents' access to their property and common areas. Arrange alternative temporary access routes if necessary. 	It is not considered as a separate cost item	
Organization of the construction site and dismantling of the site after completion of construction works	An adverse impact may occur if the Contractor fails to ensure that the area is cleared of construction debris, production waste and reclamation of disturbed land during the construction process	Ensure removal of all waste and construction debris from the facilities for disposal at a municipal authorized construction waste landfill in accordance with the Waste Disposal Contract. Ensure removal of materials, dismantled equipment, etc.	It is not considered as a separate cost item	

Biological Environment				
Flora and fauna	Tree and shrub cutting when laying the pipeline routes	<p>Tree and shrub cutting, crown pruning should be carried out strictly along pipe laying routes only after obtaining permits from territorial environmental authorities in coordination with the local governments, taking into account compensatory planting.</p> <p>If it is necessary to cut down municipal trees, the contracting organization should request a cutting permit from Aiyl Okmotu. Then, AO with the approval of the local environmental authorities will obtain a permit to cut down the specified number of trees.</p> <p>When the water pipeline route is completed, a tree inventory should be conducted with the municipality to identify potential trees to be cut for compensation.</p> <p>In case of cutting down municipal trees, compensation in the form of seedlings will be made (the compensation amount is stipulated in the bill of quantities (BoQ). For one tree felled, 3 will be planted. The contractor shall plant saplings in the places determined by the aiyl okmotu (AO), drawing up a planting act.</p> <p>In the case of private tree felling, a RAP will be prepared in accordance with the ESS5. If trees of several owners are felled, one RAP can be prepared for a subproject.</p>	It is considered as a separate cost item in the EP BoQ.	<ol style="list-style-type: none"> 1. The Contractor shall be responsible for implementation of environmental and social mitigation measures. 2. PIU Technical Supervision Engineer / Technical Supervision Company will provide overall supervision of the construction site, including monitoring of potential environmental and social risks. 3. PIU Environmental Specialist, Social Development Specialist and Infrastructure Engineer are responsible for overall supervision. 4. State control will be carried out by the authorized state body
Social Environment				
Occupational safety of workers, health and safety, fire safety	Occupational injuries	<ul style="list-style-type: none"> • Compliance with approved occupational health and safety instructions. • All works have to be carried out using safety methods and disciplines to minimize the negative impact on the public and the environment. • Personal protective equipment must comply with safety standards (mandatory use of protective helmets, masks, if necessary, belts and shoes). • The contractor shall provide workers with: <ul style="list-style-type: none"> - drinking water during working hours; - sanitary facility including mobile bio toilets when the crew works with more than 8 people; 	It is not considered as a separate cost item	<ol style="list-style-type: none"> 1. The Contractor shall be responsible for implementation of environmental and social mitigation measures. 2. PIU Technical Supervision Engineer / Technical Supervision Company will provide overall supervision of the construction site, including monitoring of potential environmental and

		<ul style="list-style-type: none"> - medical kits for each construction site to render first-aid - anti-noise headphones, earplugs • Compliance with all fire safety requirements • The sites will be equipped with appropriate information boards and signs informing workers about the rules and regulations of work. 		<p>social risks.</p> <ol style="list-style-type: none"> 3. PIU Environmental Specialist, Social Development Specialist and Infrastructure Engineer are responsible for overall supervision. 4. State control will be carried out by the authorized state body
Aesthetics & Landscape	Landscape disturbance can be associated with the accumulation of construction debris	Once the works are completed, planning and restoration works will be carried out on the distribution network sections.		
Historical and cultural sites	The works will not affect cultural and historical sites. If previously unknown cultural heritage is encountered during project activities, the Chance Finds procedure will be followed.			<ol style="list-style-type: none"> 1. The Contractor must stop construction work in this area / site and notify the PIU. 2. PIU Technical Supervision Engineer / Technical Supervision Company will provide overall supervision of the construction site, including Chance Find; will notify the PIU. 3. The PIU (safeguard specialists) will send a notification letter to the Ministry of Culture, Information, Sports and Youth Policy of the Kyrgyz Republic. 4. The Ministry of Culture should outline the procedures.
Public safety and health.	Occupational injuries	<ul style="list-style-type: none"> • Regional inspectors of the Ministry of Natural Resources, Environment and Technical Supervision, local communities should be appropriately informed about upcoming project activities. • Local communities will be appropriately informed about the works through publications and/or media alerts and/or information boards in public places (and at work sites). 	It is not considered as a separate cost item	

		<ul style="list-style-type: none"> • All permits required by law for the use of waste landfill/dump, as well as approvals from the Sanitary Inspectorate, etc. during construction and rehabilitation works at the site must be obtained. • The contractors shall: <ul style="list-style-type: none"> - organize parking of machinery at a safe distance from social facilities (schools, kindergartens, hospitals, etc.); - fence the excavated trenches with warning signal tapes; - install road signs, safety signs for pedestrians and drivers; - provide residents with a sufficient number of safe crossing bridges (over trenches). 		
Safety and health of workers	Workers can be injured during their work	<ul style="list-style-type: none"> • Regional inspectors of the Ministry of Natural Resources, Ecology and Technical Supervision, who control construction works and environmental safety will be duly notified of the forthcoming project works. • Service for control and supervision of labor legislation under the Ministry of labor, social security and migration of the Kyrgyz Republic, which is engaged in the protection of labor rights of workers and employers • All work shall be performed in a safe and disciplined manner and organized so as to eliminate work-related injury. • Personal protective equipment of workers must meet work safety standards (with mandatory permanent wearing of helmets, protective masks in those conditions where it is necessary, safety goggles, safety harnesses and safety shoes). • Appropriate directional and informational signage will be posted at the site to inform workers of the basic rules and regulations of the work to be performed. • Warning signs, signage, and signal tapes shall be installed for the safety and protection of workers. 		<ol style="list-style-type: none"> 1. The Contractor shall be responsible for implementation of environmental and social mitigation measures. 2. PIU Technical Supervision Engineer / Technical Supervision Company will provide overall supervision of the construction site, including monitoring of potential environmental and social risks. 3. PIU Environmental Specialist, Social Development Specialist and Infrastructure Engineer are responsible for overall supervision. 4. State control will be carried out by the authorized state body
Inflow of workers and	Conflict situations in	Require workers to:	It is not considered as a	

labor issues	employment. Unsatisfactory living conditions. Harassment of local residents or vice versa.	<ul style="list-style-type: none"> • comply with working and rest conditions, • comply with the labor schedule. • Provide job skills training to increase community participation • Provide adequate sanitary facilities (toilets and washing facilities) at the workplace with sufficient supplies of hot and cold running water, soap and hand drying devices. • Install a temporary septic tank system for any residential labor camp without causing pollution to nearby waterways. • Raise employees' awareness of the overall management of community relations, establish a Code of Conduct in line with international practices and strictly enforce them, including dismissal of employees and financial sanctions on an appropriate scale. 	separate cost item	
Human Communities	Existing communications failure	Timely warning of the population about upcoming shutdowns. Quickly restore the operation of utilities.		Local Self Governments PIU
	Gender quota	<ul style="list-style-type: none"> • Equal participation, consideration and reflection of women's interests and opinions throughout the project implementation period. <p>At least 30% of participants in all project meetings and hearings will be women. Under the project, communities will be invited to establish rural settlement water committees. At that, at least 30% of the committee members will be women.</p>		Local Self Governments PIU
	Poverty	A plan will be developed under the project to connect poor households to water services.		Aiyl Okmotu (AO) Municipal water supply enterprise PIU
	Possible social resistance against tariff increases	Social mobilization under the project, community outreach (public works, hearings, development and implementation of information campaign plans). Tariffs will be developed taking into account community views received during public consultations.		Aiyl Okmotu (AO) Municipal Water Supply Enterprise (MWSE)/Community Drinking water Users Union (CDWUU) supported by the PIU
	Limited capacity of local governments	The project includes selected activities aimed at capacity building and technical support to local governments		PIU

	Actual project implementation delays or construction delays that may pose a threat to public safety	Delays in the implementation of construction work can cause some discontent. In such cases, community outreach will be conducted.		Contractor PIU
Operational Period				
Appropriate operation	System breakdown, equipment failure.	<ul style="list-style-type: none"> • Ensure the use of environmentally acceptable fuel • Routine maintenance (12 months warranty period for the system) • Ensure that all assurances and certificates are obtained in accordance with fire safety and air emissions/concentrations monitoring requirements • Ensuring proper and efficient use of water resources and preventing water losses and leakages and excessive water consumption - installation, operation and periodic inspection of water meters at water consumers 		Operating organization, local authorities.
Leaks in the water supply system, water discharge during flushing of water pipes	Leaks in the water supply system and a drop in pressure can lead to poor water quality (dirty water entering the pipeline). In addition, some households may be temporarily left without water.	<ul style="list-style-type: none"> • Use of environmentally friendly fuel. • Regular maintenance (system warranty period is 12 months) • Ensuring that all warranties and certificates are obtained in accordance with fire safety requirements and monitoring of emissions/air concentrations. • Ensuring correct and efficient use of water resources and prevention of water losses, leaks and excessive water consumption - installation, operation and periodic testing of water meters at water consumers. • In case of a leak, the operating organization must shut off the water supply, determine the location and nature of the accident, and then carry out repair work. • Component 3 includes the purchase of equipment for operation and maintenance, as well as training in the operation of the system. • When flushing water pipes, water will be discharged into irrigation canals. 	Events, trainings and meetings	Municipal Water Supply Enterprise, CRWSSP PIU
Using calcium	During the construction	• The contractor will develop instructions for	Events, trainings and	Municipal Water Supply

hypochlorite (or calcium hypochlorite, or any other chemicals)	period, work with chlorine or other chemicals is not expected, so exposure is excluded. During operation of the water supply system, exposure is possible for people working directly with chlorine or other chemicals (in the work area/chlorination room).	servicing the water supply system, including instructions for handling chlorine (or calcium hypochlorite, or any other chemicals). <ul style="list-style-type: none"> Educational and informational work will be carried out as part of the project. 	meetings	Enterprise, CRWSSP PIU Department of Disease Prevention and State Sanitary and Epidemiological Surveillance
Wastewater management	Pollution of groundwater due to the lack of effective wastewater treatment and discharge of untreated water into the area	<ul style="list-style-type: none"> Proper control over the operation and efficiency of local treatment facilities. Regular monitoring of the efficiency of treatment facilities. Obtaining permission for water use in accordance with the requirements of the legislation of Kyrgyzstan. Timely cleaning of the street toilet, which will be used as needed 	Events, trainings and meetings	School/kindergarten administration, Department of Disease Prevention and State Sanitary and Epidemiological
Possible increase in water tariffs	Currently, utility rates are below cost recovery levels and it is likely that water rates will be revised upwards once the system is operational. This could lead to public discontent.	<p>The project will build the capacity of local authorities and municipalities responsible for the provision of water services in the project areas. This will include topics and support on tariff setting, billing and collection systems, training on operations and maintenance (e.g. disinfection), water quality testing, customer management, grievance mechanisms, human resources and commercial management. The project will also support the preparation of service contracts to clarify and formalize the respective responsibilities of the operator and asset owner and support the management of service quality, tariffs and financing mechanisms.</p> <p>Institutional support at the local level will also focus on strengthening the capacity of the department at the district level, with a focus on sector monitoring and technical support on complex operations and maintenance issues.</p>	Events, trainings and meetings	Municipal Water Supply Enterprise, SIDWSWD

		The project will support the development of connection subsidy strategies and tariff setting mechanisms to meet the needs and requirements of the poorest and most vulnerable.		
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7. Monitoring Plan

Which parameter is to be monitored	Where to be monitored	How will be monitored (instrument type)	When (Measurement frequency)	Monitoring cost. (equipment cost or the amount of contractor costs required to implement the monitoring?)	Institutional Responsibility for monitoring	Start Date
Noise	At construction site and waste dump	Visually	Continuous	Criteria /specifications to be incorporated into bidding and contract documents. It is not considered as a separate cost item	1. Site inspection is carried out by the PIU to ensure compliance with the ESMP. 2. The state inspectors will oversee the implementation of design solutions during construction and installation works or during the reconstruction of facilities, the quality of construction materials and structures. They will participate in the commissioning of completed construction projects. 3. The state inspectors, implementing the state environmental supervision, have the right to supervise in accordance with the established procedure after providing relevant identification documents in accordance with environmental regulations, standards, environmental protection measures during the project implementation. 4. The person responsible for the protection of the environment and social	After handover of the facility to the Contractor
Air	At construction site	Visually	On weekly basis			
Transportation	At and near the construction site	Visually	Continuous			
Waste disposal and storage	At construction site and waste dump	Visually	According to plan, but at least weekly			
Soil Pollution	At construction site	Visually	Continuous			
Construction site dismantling	At construction site	Visually	According to plan			
Trees, shrubs	At construction site	Visually	Continuous			
Safety of workers	At construction site	Visually	Continuous			

					<p>environment and occupational safety of the contractor organization on regular base instructs workers on compliance with safety measures and registers with a specially created logbook about the completion of the instruction.</p> <p>5. The contractor provides workers with special protective equipment, taking into account seasonality.</p> <p>6. The contracting organization provides workers with adequate housing, food, first aid kit and also creates sanitation conditions both in the camp/residence base and in the construction site by concluding contracts for the provision of the above types of services mainly with the local population, which have appropriate conditions.</p>	
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8. Supervision and reporting

Supervision of the ESMP implementation measures.

During the ESMP implementation activities, the PIU Environmental Specialist and Specialist on Social Issues will be responsible for general supervision to ensure that the measures specified in the ESMP are properly implemented. Specialists in cooperation with local authorities will monitor socio-environmental activities during the construction period.

The Field Supervision Engineer/Company shall be on the construction site at all times. Further, the PIU Environmental Specialist, Specialist on Social Issues or Infrastructure Engineer should visit the construction site at least once a month to monitor the fulfillment of the ESMP requirements during subproject implementation.

Upon monitoring completion, the PIU Environmental Specialist and Social Development Specialist should submit a site visit report to the Project Coordinator. In case of non-compliance with environmental protection measures, a statement should be prepared indicating the period of elimination of violations for the contractor.

Field Supervision Engineer/Company monitors construction work on a daily basis and records violations in the work log and notifies PIU; submits a monthly report to the PIU, including a section on safeguard measures.

Per ESMF PIU will submit to the World Bank semi-annual reports on the environmental, social, health, and safety (ESHS) performance of the Project.

When conducting socio-environmental monitoring, special attention will be paid to accidents. If any accidents resulting in serious injury or death are detected, the contractor or technical supervision engineer shall immediately notify the PIU and they will be recorded in the subproject registry.

The accident should be classified as severe, serious or minor, with a description of the type and cause of the accident. If accidents are identified, they will be recorded in the report and categorized as severe, serious and minor with a description of the type and cause of the incident.

Regular subproject progress reports submitted to PIU by the Field Supervision Engineer/Company should include information on the implementation of the environmental and social management plan. The section should contain a summary and brief description of the monitoring activities, as well as a description of the problems occurred and methods for correcting them.

In case of accident Field Supervision Engineer/Company will inform the PIU immediately. In line with the ESCP PIU will notify the World Bank within 48 hours after learning about the incident or accident.

Table 2. Institutional responsibility for the ESMP implementation

№	Responsible	Duties
1	Ministry of Natural Resources, Ecology and Technical Supervision of Kyrgyz Republic	Reviews the “Environmental Protection” section developed by the design institute as part of the design and estimate documentation for the rehabilitation of the water supply system, and issues an environmental conclusion.
2	Environmental and Technical Supervision Service under the Ministry of Natural Resources, Ecology and Technical Supervision of the Kyrgyz Republic	Carries out state supervision and control on environmental and technical safety issues at construction sites of subprojects
3	Department of Disease Prevention and State Sanitary and Epidemiological Surveillance under the Ministry of Health of the Kyrgyz Republic	It is a state supervisory body responsible for monitoring the quality of drinking water. Conducts surveys and takes samples of drinking water, examining physicochemical and microbiological indicators. Samples shall comply with the requirements of the Law of the Kyrgyz Republic Technical Regulations “On the Safety of Drinking Water”.

4	Local Self Governments	Ensure that stakeholders are informed Fulfill the terms and conditions of the Cooperation Agreement Assist in conducting public hearings. Resolving grievances during the implementation of the RAP. Pay compensation for land and assets of PAPs, as per the RAP
5	PIU Environmental Specialist	Full project environmental support. Environmental Screening. ESMP preparation. Environmental monitoring of construction works. Training for stakeholders (contractors, LSGs, community, etc.) Issuing instructions to contractor.
6	PIU Specialist on Social Issues	Full project social support. Social screening. ESMP preparation. Social monitoring of construction works. Training for stakeholders (contractors, LSGs, community, etc.) Issuing instructions to contractor. GRM management
7	Technical Supervision Engineer / Company	Conducts daily socio-environmental monitoring of construction works Issues instructions to contractor Conducts training and outreach to contractor Submits monthly report to PIU on fulfillment of socio-environmental requirements
8	Contractor	Performs the ESMP activities and the Environmental Protection Section, which received a positive state environmental conclusion. Submits monthly report to PIU on the implementation of socio-environmental activities.
9	Community Drinking Water Users Union and/or municipal water utilities	Actively participate in the process of construction and/or rehabilitation of drinking water supply systems, public supervision of construction work and compliance with the requirements of the ESMP. Providing the local population with safe drinking water. Ensure sustainability of water supply systems after construction and/or rehabilitation.

9. Public consultations/hearings

As part of the project startup, the PIU organizes meetings to launch project activities in the project area. The PIU Environmental and Social Safeguards Team will organize and conduct public meetings according to the schedule of Project activities during the lifecycle of the subproject. Minutes of public meetings, hearings, and introductory meetings will be recorded, and participant sign the registration sheets and photos will be attached to confirm the activities conducted. The PIU Public Relations Specialist is involved in the project activities to prepare and post information about the subproject on the PIU website and social media throughout the project cycle in the state and official languages. Social media channels will be used as much as possible to disseminate information, since social media usage rates are high among beneficiary users of different ages and backgrounds.

The organization and conduct of public consultations/hearings is carried out with the active participation of stakeholders, as listed in the table below.

Table 3. List of local stakeholders

Responsible site	Description of duties
PIU	Prepare an official letter addressed to the head of the AO about the intention to hold a public hearing on social and environmental safeguard measures during the project implementation period. Conducts a preliminary meeting in the subproject with the participation of the head of the AO, the management of the municipal water supply enterprise, and the chairman of the Aiyl Kenesh regarding the

	<p>organization of a public hearing for the local population.</p> <p>Prepares presentation materials about the Project, social and environmental safety measures.</p> <p>Based on the results of the public hearing, makes additions or changes to the ESMP and submits it to the WB for approval.</p>
Aiyl Okmotu	<p>Responsible for organizing the premise for holding a public hearing.</p> <p>Informs the local population about the upcoming public hearing on the water supply project and assists in ensuring maximum community participation.</p> <p>Moderates the public hearing, keeps minutes and registers participants of the public hearing.</p>
Municipal Water Enterprise (Vodokanal)	<p>Assist in mobilization of villagers to participate in public hearing.</p>
Design Institute	<p>Presents the final design decision of the subproject to the participants of the public hearing.</p>

10. Grievance Redress Mechanism

In accordance with the requirements of the World Bank's Social and Environmental Standard ESS10, the PIU will apply its Grievance Redress Mechanism (hereinafter GRM) as part of relevant component activities during the Project operation. The GRM will streamline the process of receiving, reviewing and resolving grievances that may arise as a result of the implementation of Project activities in the subproject.

The GRM process is necessary to enable direct and indirect beneficiaries, stakeholders and Project staff, at all stages of Project implementation:

- to access information about the Project;
- at all stages of the Project operations to submit their appeals for improvement of the Project activities;
- in increasing transparency and openness in the process of implementation of the Project activities;
- timely addressing issues/problems preferably at no cost and with a guarantee of timely resolution.

Citizens' appeals directly related to the Project implementation are subject to consideration. Appeals or complaints can be either individual or collective. The mechanism will also allow for anonymous complaints to be filed and addressed. In accordance with the Law of the Kyrgyz Republic "On the Procedure for Consideration of Citizens' Appeals" dated 4 May 2007 No.67, citizens/residents of subprojects can send any appeals on issues related to the scope of the Project at all stages of its implementation. This GRM will apply to the entire Project, but will focus on the construction and/or rehabilitation component of the water supply system, as direct adverse impacts from Project activities will be experienced by residents/populations living in the Project area, and social, environmental, and other issues may arise during the design, construction, and/or rehabilitation of the drinking water supply and sanitation system.

GRM key objectives:

- Register, verify, review, follow up and respond to complaints or appeals received related to social, environmental and any other issues related to Project activities;
- To reach mutually agreed solutions satisfactory to both the Project and Project-affected persons, and to resolve any grievances locally in consultation with the aggrieved party;
- To facilitate the development process at the local level while maintaining transparency, as well as to establish accountability to project affected persons;

- Establish feedback;
- Encourage vulnerable individuals and/or groups to express their views

10.1. Grievance Redress and Resolution Process

The mechanism for addressing /appeals of citizens affected during the Project implementation period and providing appropriate responses on social and environmental safety measures and gender issues will be implemented according to the following three levels, i.e. grievance commissions will be established.

It is important to note that the PIU will implement the approach used in the community mobilization activities through the establishment of Water Committee (hereinafter WC) of rural settlement consisting of representatives of aiyl okmotu, aiyl kenesh, council of aksakals, council of women, council of youth, vulnerable category of population, ethnic minorities, Municipal Water Supply Enterprise, and interested rural residents. The main purpose of forming and interacting with the WC is to facilitate the Project to broadly involve rural residents in the process of addressing the rural settlement water supply and sanitation issues, as well as in:

- dissemination among the rural residents of reliable information on the progress of the project on construction/rehabilitation of water supply system (WSS) and modernization of sanitary facilities of social institutions;
- assistance in increasing transparency and openness in the process of implementation of the Project activities;
- conducting joint monitoring of activities of aiyl okmotu and MWSE on water supply system management and provision of safe drinking water to the population.

Establishment of the Community Water Committee (WC) of the rural settlement at the subproject level is carried out at the introductory meeting of the rural settlement, where information on the Project, agreement on the composition of the WC and the adopted Regulation on the WC are provided, which are all together recorded in the Minutes of the general introductory meeting of the rural settlement. At the first meeting of the WC, a chairperson, a secretary and a person responsible for promotion of the GRM in the subproject are elected.

Further, the Commission for consideration of citizens of the local level is established at the level of aiyl okmotu on the basis of the Order of Aiyl Okmotu consisting of the head of Aiyl Okmotu, who is the Chairman of the Commission, the Chairman of Aiyl Kenesh is appointed as the Co-Chairman of the Commission, representatives of the regional branch of the state institution “Cadastre”, the territorial department of the MNRETS KR, the DDPSSSES of the MH KR, director of MWSE, the Chairman of the WC subproject, rural resident and representative of the PIU in the subproject.

Regarding the Commission for consideration of citizens' appeals at the national level within the framework of the ongoing PIU of the DDWSWD Project, this Commission was established by the Order of the DDWSWD with No. 27/p dated 09.11.2023. The Commission is composed of:

- The Director of State Institute for Development of Drinking Water Supply and Wastewater Disposal (SIDWSWD) is the Chairman of the Commission for consideration of citizens' appeals;
- The head of the Department of Drinking Water and Wastewater Disposal is the co-chair of the Commission;
- A representative of the State Civil Service Agency and Local Government;
- Representative of the Department of the Ministry of Natural Resources, Ecology and Technical Supervision of the Kyrgyz Republic;
- Representative of the Department of Disease Prevention and state sanitary and epidemiological supervision of the Ministry of Health and Social Development of the Ministry of Health of the Kyrgyz Republic;
- PIU Director;
- PIU Environmental Specialist;

- PIU Social Safeguards Specialist.

In table 4 provides information on levels, timeframe and responsible persons for consideration of appeals and complaints of citizens and stakeholders.

Table 4. Matrix for managing appeals/complaints from citizens affected by the Project.

Step	Impact level	Process	Timeframe
1	Decision at the subproject rural water committee (WC) level.	At the initial stage, the WC listens to the Applicant and proposes acceptable solutions. If, the Applicant is not satisfied with the decision of the WC, he or she shall file a complaint in writing with the local Grievance Commission.	2-3 working days
2	Decision at the aiylokmotu level	Upon receipt of a written request from the Applicant, the AO Commission at the local level will analyze the request and prepare a package of documents. The decision of a majority of the Commission members shall be considered final and the final MoM shall be signed. The decision shall be made within 14 working days with sending the conclusion of the commission's decision to the Applicant. If the Applicant is not satisfied with the decision of the Commission, he/she shall submit an appeal in writing to the Central Level Commission with the opinion and supporting documents received at the local level.	14 working days
3	Central level solution	Upon receipt of a written appeal from the Applicant, the Commission at the central level will review and prepare the appeal package. The formal hearing shall be held on a date agreed upon by the Commissioners. Members of the Commission will contact the Applicant by telephone and organize a visit to the Applicant's community to verify an objective assessment of the facts and verify their accuracy if necessary. Within 14 working days of the filing of the appeal, the Commission shall make a decision and sign the final MoM for further submission to the Applicant.	14 working days

At all levels, the PIU Social Safeguards Specialist will maintain direct communication with the Project Affected Person (PAP). The project will determine the validity of the grievance, notify the complainant that he/she will be provided assistance. A response will be provided within the above timeframes indicated in the matrix above, during which time meetings and discussions will be held with the affected person. In the cases when the resolution of a complaint requires a special inspection (expert examination), requesting additional materials or taking other measures, the deadlines for resolving complaints may be exceptionally extended, but for no more than 30 calendar days in accordance with the Law of the Kyrgyz Republic dated 4 May 2007 No. 67 "On the Procedure for Consideration of Citizens' Appeals". The project will support PAPs at all stages to resolve the complaint and ensure that their complaint is addressed in the best possible way.

The Project's GRM is not an obstacle to appeal to the court, in accordance with the legislation of the Kyrgyz Republic, a PAP has the right to appeal to the court at any stage of consideration of his/her grievance. Anonymous complaints will be reviewed and actions will be taken on them within the Project.

Register of appeals/complaints.

All incoming complaints or appeals are to be registered in a local and national complaints register, the information from which is duplicated in an electronic database. The database should contain, at a minimum, relevant information on the date of submission, registration number, nature of the issue, responsible person, timeframe for problem resolution and feedback (positive/negative).

The following communication channels have been established under the current PIU project through which residents/beneficiaries can send appeals at different stages of project implementation:

- WhatsApp group is an instant text messaging system for mobile devices with voice and video support to the following GRM numbers: + 996 998 544 575 и +996 707 544 575;
- oral or written communications received during on-site working meetings and by Project field specialists in the subproject;
- incoming correspondence on purpose to the PIU reception desk;
- incoming e-mail correspondence PIU@tunuksuu.kg
- by mail - Bishkek, Baytik Baatyr str. 34.
- by phone: + 996 (312) 54-45-75

10.2. Handling sensitive grievances

Given the Standards for the Prevention of Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH), which the World Bank requires all WB-financed projects to adhere to, these standards and responsibilities are also to be adhered to, whereby measures are taken to raise awareness on prevention and mitigation of SEA/SH. At all stages of project implementation, all the PIU staff and contractors will be informed on understanding the principles of control and prevention of the SEA/SH risks. The GRM will ensure access and confidentiality of the grievance mechanism, and will ensure that the applicant does not fear likely retaliation. These complaints will be investigated without any delay and all responsible will be held accountable. The SEA/SH issues will require certain additional measures:

- Gender sensitivity will be taken into account in the hiring of social work specialists to work in the PIU.
- Safeguards specialists will be informed of the SEA/SH issues.
- In addition to sociocultural sensitivity and non-violent communication in employee training, the SEA/SH will be on the agenda as well. Training for employees will include the following information about the SEA/SH:
 - ✓ Definition of violence against women in national and international instruments;
 - ✓ Types of violence (physical, sexual, economic, emotional);
 - ✓ Legal Sanctions.
- The grievance mechanism will be accessible and will ensure the confidentiality of personal information.
- Awareness-raising activities will be conducted to inform women about the application of the mechanism. The following types of information will be provided in these activities:
 - ✓ Women's rights;
 - ✓ Self-defense in cases of violence and sexual assault. Emergency phone numbers;
 - ✓ Contact information of institutions and organizations to which they can apply;
 - ✓ Grievance mechanism and privacy policy.
- The principle of confidentiality of the grievance mechanism will be repeated in all information materials.

The Project will use additional mitigation measures proportional to the risk. The Contracting organization will be responsible for developing personnel management procedures, health and safety plans, and the SEA/SH protocols that will apply to its own employees and employees of (sub)contractors who are employed by the Project. These procedures and plans will be submitted to the PIU for review and approval before contractors are allowed to begin construction work. All contractors will be required by contract to commit against the use of child labor and forced labor, to take measures regarding the effects of the SEA/SH, and PIU personnel responsible for contractor oversight will monitor and report on the absence of forced labor and incidents of the SEA/SH. All personal data and complaints received by GRM will be treated confidentially unless the Applicant consents to the disclosure of their personal information. In particular, the confidentiality of sensitive issues and the SEA/SH complaints from communities will be respected.

10.3. WB Grievance Redress Service

Communities and individuals who believe that they are adversely affected by a World Bank-supported Project may also file complaints directly with the Bank through the Bank's Grievance Redress Service (GRS) (<http://projects-beta.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service>). A complaint may be submitted in English, Kyrgyz or Russian, although complaints written in languages other than English will require additional time. You can file a complaint with the Bank's GRS through the following channels:

- by e-mail: grievances@worldbank.org
- by fax: +1.202.614.7313
- by mail: The World Bank, Grievance Redress Service, MSN MC10-1018, 1818 H Street Northwest, Washington, DC 20433, USA
- To the World Bank Office in the Kyrgyz Republic, Bishkek, J. Abdrahmanov Str. 191, Bishkek, Kyrgyz Republic, bishkek@worldbank.org, and by phone: +996 312 625262

The complaint should clearly state the adverse impact allegedly caused or likely to be caused by the Bank-supported project. It should, where possible, be supported by available documentation and correspondence. The applicant may also indicate the desired outcome of the complaint. The complaint must include the name of the applicant or designated representatives and contact information. Grievances filed through the GRS shall be addressed as soon as possible so that Project-related issues can be quickly resolved.

Further, communities and individuals affected by the Project may file complaints with the World Bank's Independent Inspection Panel, which then determines whether harm has been or may have been caused as a result of the World Bank's failure to comply with its policies and procedures. Complaints may be filed with the Inspection Panel at any time after the matters have been brought to the attention of the World Bank and after bank management has had an opportunity to respond. For information on how to file a complaint with the World Bank Inspection Panel, please visit www.inspectionpanel.org.

Annex 1. Ecological Screening

1. Project Name: Kara-Bulak

2. Summary Subproject Description

The water supply scheme is gravity-pressure. The water supply system is combined domestic and fire-fighting. The project provides:

- Reconstruction of water intake structure of intake type with a capacity of up to 15 l/s;
- Construction of a 4.825 km water pipeline from polyethylene pipes with 160 mm diameter;
- Water supply network is made of polyethylene pipes: PE100 SDR-17 od 225x13,4 mm L=2429 m; od 160x9,5 mm L=6445 m; D=110x6,6 mm 18315 m; D=75x4,5 mm L=7774 m;
- Construction of 3 clean water tanks/reservoirs of 300 m³ each with a total volume of 900 m³;
- Construction of a disinfection station (chlorinator room) – 2 pcs;
- Construction of watch house - 2 pcs;
- Construction of restroom - 2 pcs;
- Fencing the water intake area and 2 reservoir sites.

The duration of construction work is 18 months, the defect liability period is 12 months after the facility is put into operation.

3. Will the project affect the following environmental parameters during construction or operation?

Indicate by checking at what stage the impact will occur and whether mitigation measures are required.

Environmental component	Construction Phase	Operational phase	Mitigation measures
Earth environment			
Land and soil degradation: will there be excavation work in the project?	Yes	No	<ul style="list-style-type: none"> • Ensure proper selection of areas for construction site location, where solid waste collection and safe toilets (possibly composting toilets) should be provided. • Timely cleaning of territories from fuel oil in case of oil spills on the soil • Washing of machinery and equipment on the construction site is prohibited. • Fueling of machinery will be carried out at specialized fuel stations. • Vehicles with bad fuel systems exceeding emission standards and hydraulic systems are not permitted. • Use of vehicles that have passed technical inspection. • Storage and warehousing of fuels, lubricants and construction materials is not allowed to prevent pollution from entering the river. • Daily checks of machinery and equipment for oil leaks. • Topsoil removal. Improvement of the territory in accordance with the project.
Soil and groundwater contamination	Yes	No	
Generation of solid waste, including toxic waste?	Yes	No	<ul style="list-style-type: none"> • Before the start of works, to sign an agreement with the local municipality for disposal of construction and household waste at the municipal landfill.

		<ul style="list-style-type: none"> • Determine waste collection and disposal methods before work begins, as well as storage locations for the main types of waste generated during demolition and construction work. • Mineral construction waste and waste generated during dismantling of objects must be separated from organic, liquid and chemical waste at the work site, after which they are stored at the appropriate site. • All records and documentation of waste removal and disposal must be properly maintained as evidence of good waste management practices at the site as intended. • Recycling of waste inert materials (except asbestos) is permitted where possible. • Construction waste is transported at the contractor's expense to storage sites. <p>Asbestos Containing Materials Some construction debris may contain asbestos. The Contractor must train its employees to assess the presence of asbestos-containing materials and determine procedures for the safe disposal of asbestos using appropriate protective equipment and storage in sealed containers. Safety requirements for asbestos management are specified in Annex 4.</p> <ul style="list-style-type: none"> • Work with and disposal of asbestos must be carried out by qualified and experienced specialists using appropriate protection (masks, gloves and overalls). • Before removal (if removal is necessary), the asbestos is treated with a wetting agent to minimize the generation of asbestos dust. • Asbestos-containing materials must not be crushed or cut. • Workers should avoid crushing/destruction of asbestos waste and dispose of it in an organized manner at construction sites, followed by removal to designated areas or disposal. • If asbestos material is to be temporarily stored, its waste must be securely isolated in closed containers and labeled as hazardous material. • Hazardous waste transportation to landfills is carried out by specially equipped own transport of the enterprise or specialized transport companies. • Transportation of unpackaged asbestos in open bodies of vehicles is not
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			<p>permitted.</p> <ul style="list-style-type: none"> • ACM should be safely disposed of at a local hazardous waste landfill, if available, or at a municipal landfill after prior arrangement with the landfill operator for safe storage.
Activities with positive or negative impacts on ecosystem services or biodiversity	Yes	No	<p>The cutting down of trees and shrubs and pruning of crowns should be carried out strictly along the routes for laying pipes only after obtaining permits from territorial environmental authorities in agreement with local authorities, taking into account compensatory plantings. If it is necessary to cut down municipal trees, the contracting organization should request a cutting permit from Aiyl Okmotu. Then, AO with the approval of the local environmental authorities will obtain a permit to cut down the specified number of trees. Once the water pipeline route is completed, the municipality must conduct a tree inventory to identify potential trees that will be cut down as compensation.</p> <p>In case of felling of municipal trees will be provided compensation in the form of seedlings (the amount of compensation is indicated in the bill of quantities (BoQ)). For one tree cut down, 3 will be planted. The contractor plants seedlings in places determined by aiyl okmotu (AO), drawing up act of planting.</p> <p>In the case of private tree felling, a RAP will be prepared in accordance with ESS 5. If trees of several owners are cut down, one RAP may be prepared for the subproject.</p>
Air Quality			
Does the project involve emissions of pollutants?	Yes	No	<ul style="list-style-type: none"> • Dust control measures and related household activities such as spraying water to prevent dust, using curtains and barriers at the construction site. • Use of masks, gloves and protective clothing. • Limit vehicle speeds and select appropriate transport routes to minimize exposure to dust-sensitive receptors. • Equip vehicles carrying bulk materials with removable awnings. Cement is delivered to construction sites only in packaged, hermetically sealed bags. • The above equipment is ordered only for the period of specific work and is not permanently located on the construction site.

			<ul style="list-style-type: none"> • Vehicles with bad fuel systems exceeding emission standards are not permitted. • It is prohibited to burn construction and household waste at the work site. • Keep the surrounding area clean and free of construction debris to minimize dust and contamination. <p>Organization of proper storage and transportation of flammable and hazardous materials (gas cylinders, bituminous materials, paints, solvents, glass and rockwool). It should be noted that the construction of facilities will not take place in parallel, but in stages and sequentially, from one facility to another.</p>
Aquatic Environment			
Quantity of water: will the project include water use?	Yes	No	<ul style="list-style-type: none"> • Avoid spills/leaks of fuel oil into the ground; in case of unintentional spills, remove contaminated soil and transport it to appropriate places. • Timely cleaning of areas from fuel oil in order to prevent their entry into local water courses and groundwater together with atmospheric precipitation. • Vehicles with bad fuel systems exceeding emission standards and hydraulic systems are not permitted. • Cleaning the outdoor toilet pit from liquid waste and its removal to municipal wastewater treatment plants according to the Disposal Law. • Excavations near groundwater sources are prohibited. • Work areas with equipment, concrete mixers and fuel tanks should be located outside the water protection zones. • Installation of special pallets and other prefabricated equipment in places of possible leaks and spills of fuel and lubricants, technical solutions. <p>Disinfection of pit toilet and filling with soil in accordance with SNiPs.</p>
Water Quality/Pollution: Will the project contribute to surface water pollution?	Yes	No	
Socio-Economic Environment			
Will the project ensure the absence of deterioration in human health, labor safety and unhindered living of residents near the project area, including traffic and road safety?	Yes	Yes	<ul style="list-style-type: none"> • Compliance with approved occupational health and safety instructions. • All work must be carried out using safe practices and procedures to minimize negative impacts on the public and the environment. • Personal protective equipment must comply with safety standards (mandatory use of protective helmets, masks, if necessary, belts and shoes). • The contractor is obliged to provide

			<p>workers with:</p> <ul style="list-style-type: none"> - drinking water during working hours; - portable toilets when a crew of more than 8 people is working; - medical kits for each construction site for first aid - anti-noise headphones, earplugs • Compliance with all fire safety requirements <p>The sites will be equipped with appropriate information boards and signs notifying workers about labor rules and regulations.</p>
Does the project require public consultation to address environmental issues and suggestions from local residents?	Yes	No	Socio-environmental risks and impacts, as well as mitigation measures, will be submitted for public consultation/hearing. Suggestions from local residents and community organizations will be taken into account in finalizing this ESMP.
Social Implications	Yes	Yes	<ul style="list-style-type: none"> • Local communities will be appropriately informed about the works through publications and/or media alerts and/or information stands in public places (and at workplaces). • All permits required by law for the use of landfill/waste dump, as well as permits from the Sanitary Inspectorate, etc. during construction and restoration work at the site must be obtained. • The Contractor is obliged to: <ul style="list-style-type: none"> - organize parking of machinery at a safe distance from social facilities (schools, kindergartens, hospitals, etc.); - fence off the opened trenches with warning tapes; - install road signs, safety signs for pedestrians and drivers; - provide residents with a sufficient number of safe bridges crossings (across trenches).
Actions that may affect cultural heritage	No	No	

Part 2. (to be completed by the PIU based on the results of the environmental impact assessment)

1. Environmental category of the subproject (High (H), Significant (S), Moderate (M) or Low (L)) Moderate (M) (if the project is classified as H, the following items do not need to be filled in - the subproject cannot be included in the project)
2. Will the project activities be implemented?
 - a) in or near sensitive and valuable ecosystems - wetlands, wildlife and endangered species habitats - NO (yes or no)
 - b) in areas with archaeological and/or historical monuments or active cultural and social institutions or near them - NO (yes or no)

- c) in regions prone to intensive development or where there are conflicts in the distribution of natural resources; along watercourses, in aquifer recharge zones or water bodies used for drinking water supply; and on lands or waters containing valuable resources (such as fisheries, minerals, medicinal plants, basic agricultural soils) - NO (yes or no)
If “yes”, the subproject will be excluded from the Program.
3. Environmental assessment required (yes or no) YES (the following items should be filled in only for significant, moderate subprojects)
 4. Types of required EIA documents (please circle):
 - a) Partial ESIA, including site assessment and Environmental and Social Management Plan (ESMP) for subprojects with significant risk;
 - b) **Environmental and Social Management Plan for subprojects with moderate risk;**
 - c) ESMP checklists for low-risk subprojects;
 - d) **Draft Environmental Impact Report (for Kyrgyz subprojects categories 2-4)**
 - e) Environmental Impact Report (only for Kyrgyz subprojects of category 2-3)
 5. What environmental and social issues are raised in the subproject?

It is expected that these works may cause a variety of minor to moderate local impacts, which may include:

- increased pollution from construction waste;
- generation of dust, noise and vibration during the operation of construction machinery and mechanisms;
- associated risks due to improper disposal of construction waste and asbestos-containing materials that can be found in old water pipes;
- operational or emergency spills of fuel and lubricants from construction machinery and equipment;
- inadequate restoration of construction sites after completion of work;
- increased road traffic/transport traffic, as well as health, safety and public safety issues;
- potential temporary local disturbance of biodiversity and living natural resources.

Conclusion (can the subproject be included in the program and if so, under what conditions): the subproject can be implemented provided that all social and environmental mitigation measures are included in the project.10. If an environmental and social impact assessment is required, what specific issues need to be addressed?

Part 3. Final Environmental Impact Assessment Checklist (to be filled in by the PIU based on the review of proposed mitigation measures and environmental impact assessment (if necessary))

Has an Environmental and Social Management Plan been prepared? (Yes or no) **YES**

Are the mitigation measures to be included in project implementation adequate and appropriate? (Yes or no) **YES**

Will the project meet existing emission and waste control standards? (Yes or No) **YES** If no, is an exception necessary? _____

Do you need an environmental monitoring plan? (Yes or No) **YES** If yes, was it prepared? (Yes or no) **YES**

Have public consultations been held on the potential environmental impacts of the proposed subproject? (Yes or no) **YES** Were the MOM made? (Yes or no) **YES**

Part 4. Final Environmental Assessment Checklist (2)

(заполняется ОПІ на основании рассмотрения предлагаемых мер по смягчению последствий и оценки воздействия на окружающую и социальную среду (при необходимости))

(to be filled in by the PIU based on a review of proposed mitigation measures and an environmental and social impact assessment (if necessary))

Is the design documentation ready? If not, what is missing? *DED is ready*

Are permits required for the use of land and resources? If so, were they obtained? *Yes, the solid waste disposal permit is required. Permits will be obtained after the contractor has been selected.*

Do solid waste permits need to be obtained? If so, were they obtained? *Yes, will be obtained after the contract with the contractor is awarded*

Are waste water discharge permits required? If so, were they obtained? *Yes, will be obtained after the contract with the contractor is awarded*

Is sanitary inspection required? Is the permit issued? *Yes*

Is an environmental assessment obtained and approved? *Yes*

Is there any potential for soil degradation or contamination? If yes, were appropriate avoidance or mitigation measures planned and envisaged? *Yes, measures are envisaged*

Is there a potential for water quality deterioration or contamination? If yes, were appropriate avoidance or mitigation measures planned and envisaged? *Yes, measures are envisaged*

Is there a potential for air quality deterioration or pollution? *Yes, measures are envisaged*

If yes, were appropriate avoidance or mitigation measures planned and envisaged? *Yes, measures are envisaged*

Is there a threat to the biological environment? If yes, were appropriate avoidance or mitigation measures planned and envisaged? Is there any potential for adverse social impact? *Yes, measures are envisaged*

If yes, are the necessary preventative, mitigating or compensatory measures planned and envisaged? *Yes, measures are envisaged*

Was the level of public participation in design, planning and public consultation sufficient? Was public opinion raised during the consultation process? *Yes*

What is the desirable level, frequency and extent of environmental monitoring during the construction phase? *At least once a month*

What is the desirable level, frequency and extent of environmental monitoring during the operational phase? *Semi-annual*

Annex 2. Social Screening

Project Name:	CRWSP
Subproject Name:	Kara-Bulak
Location (oblast, city, village)	Batken oblast, Batken rayon, Kara-Bulak aiyl aymak, Kara-Bulak village.

Subproject Brief Description:

Kara-Bulak village is located in the central part of the oblast, on the Kara-Bulak River bank, at a distance of approximately 11 km southeast of Batken city, the administrative center of the oblast and rayon. The absolute elevation is 1180 meters above sea level.

- The average annual outdoor air temperature - 9,3⁰C;
- Absolute minimum air temperature - 28⁰C;
- Absolute minimum air temperature - 37⁰C;
- Calculated temperature of the coldest five-day period -13⁰C;
- Average temperature of the coldest period (ventilation) -7⁰C.



According to the data of aiyl okmotu for 2023 the population is 3,725 people living in 886 households. The main occupations of the population are: cattle breeding, farming, small business. Women, who make up half of the population of the village, are mainly engaged in housekeeping. Livestock breeding includes:

- Number of cattle -1350 animal units;
- Small castle - 3572 animal units;
- Horses – 201 animal units.

The following municipal social facilities are located on the territory of Kara-Bulak village:

- general educational institutions - schools 2;
- preschool institutions - kindergartens 1;
- rural health post - 1;
- community center - 1;
- museum - 1;
- administrative building (AO) - 1.

Summarized information on the subproject and its components, their objectives and benefits:

The Kara-Bulak subproject will implement a number of activities under the following Project components:

Under Component 1 “Investments in Infrastructure and Improved Quality of Service Delivery”, activities on construction of water supply system (WSS) are envisaged, including assessments of the technical condition of the existing WSS and based on the results of development of design and estimate documentation (DED). After approval of the Design and Estimate Documentation (DED) for the Kara-Bulak subproject, the Project will start construction and installation works of the water

supply system.

In general, the Project envisages a combined domestic and firefighting water supply system. The water supply source for the village is spring water. The Project envisages the designed intake structure and rehabilitation of the existing one. The water intake site is located 4.825 km above the village, the total flow rate of springs is 15 l/sec.

The water distribution network is designed along all existing streets of the villages.

The network is looped and water supply wells with fire hydrant, regulating gate valves are installed on the network, and for future connection of consumers, crosses with water points are provided in the wells.

The water intake site is located in the peripheral part of the Kara-Suu River fan, represented by a wide gorge, with a general surface slope to the north-west. The designed water intake is intended to collect calculated flow rate at any fluctuation of spring flow. The water intake consists of two compartments with filter layers and from a prefabricated collecting well. 1/3 part of the pipe is arranged with a filter fill acting as a return filter. Water is supplied from the water intake to the storage tank. The project envisages repair of the existing reservoir of 300 m³ capacity 2 pcs.

Принятая схема водоснабжения включает в себя следующие здания и сооружения:

1. the existing intake structure and the designed one
2. the existing reservoir with a capacity of 500 m³ - 2 pcs.
3. chlorinator room, designed
4. watch house - 1 pc.
5. toilet for 1 point - 1 pc.
6. water supply wells - 293 pcs. (with distribution units with 6 connections).
7. fire hydrants - 6 pcs.

Fire hydrants are provided on the water line to provide external fire extinguishing. Water consumption for fire extinguishing is not included in the calculated daily water consumption. This flow rate is provided in the form of a reserve in clean water tanks for the total three-hour duration of firefighting. The water supply network checked by calculation for supplying the flow rate for firefighting, coinciding with the hour of maximum water consumption for household and drinking needs.

In accordance with the requirements of regulations, sources of drinking water supply shall have sanitary protection zones (SPZ) in order to ensure their sanitary and epidemiological reliability. Sanitary Protection Zones shall include the territory of the water supply source at the point of water intake and shall consist of three zones - strict regime, second and third - restricted regimes. The project will provide water supply networks to ensure 100% coverage of residential and communal buildings with centralized water supply systems with simultaneous replacement of old networks that depreciated and networks with insufficient capacity.

Under Component 2 “Institutional Strengthening of Climate Resilient Service Delivery and Water Resources Management”, the Project will undertake the following activities:

- information, introductory seminars and meetings for local communities;
- connecting households and social institutions to the WSS system;
- support in the organizational development of WSS enterprises and the establishment of new enterprises (in the absence of such), including the development of constituent and organizational documents, office management, HRM, etc.;
- support of local self-governments and WSS enterprises in their work with the population and customers;
- improvement of technical and operational activities of WSS enterprises;
- assistance in tariff development and public consultations on tariffs;
- development/updating of training modules, including topics in wastewater, wastewater treatment and sanitation facilities management;
- trainings and exchange visits (including workplace trainings with the involvement of specialised

specialists);

- organization of short-term professional development courses, certified training on the basis of profile universities, secondary and primary vocational educational institutions in the field;
- consulting and information support;
- rehabilitation and/or construction of sanitary units and technical facilities of pilot social institutions.

Detailed information on the existing condition of the structures and the proposed construction works, including volumes:

The existing water supply system of Kara-Bulak village was constructed in 1990 and in 2006 an additional 4500 m of water supply network was constructed. The water supply of the village is currently provided from the intake structure. Water supply networks of the village are made of asbestos-cement and steel pipes. The pipelines are damaged by corrosion, which is especially related to the steel sections of the pipelines (diameter of pipelines: 40, 50, 100, 150). Depreciation of water supply networks is 80%.

There is a sanitary protection zone, partial repair of fences and gates is required. There is a transformer substation TP10/0.4kV to provide lighting on the site. There are also wells and standpipes, but all of them are broken. Due to the lack of irrigation network, many household lands are irrigated with water from the canal through the reservoir and for household and drinking needs.

Available map design showing the site and proposed activities to explain the work:



Does the subproject include construction works, including construction of new facilities, extension, modernization or (re)construction of existing drinking water supply and wastewater disposal facilities?

100% replacement of distribution networks

Construction of the new reservoir

Rehabilitation of water intake

1. Water intake.
2. Pumping station of II lift
3. Reservoir for 500 m³.
4. Water pipeline
5. Water supply network.

Is this subproject related to any other activities not financed under the Project??

No, the subproject is not related.				
Will this subproject include any additional off-site impacts/activities?				
Questions	Yes	No	Unknown	Observations, comments
Impact due to acquisition/donation of land				
Is the land area required for the project known? (Indicate estimates in notes, including ownership status, area, land use type, etc.)	+			The land plot allocated for the construction of the SVS, with an area of 1.26 hectares of the corresponding category.
Is the ownership status and current use of the land to be used for construction known? (details in comments). Please clarify, is the site selected for this work free of encumbrances and owned by the subproject executor?	+			Document confirming ownership: - Resolution No. 112 dated 09.10.2024 Title document: - State act on the right of perpetual use of a land plot (Series B No. 058981). The land category corresponds to the construction of a water supply system (WSS).
Is there any estimate of the land area owned/actually used by individuals/legal entities that is subject to land acquisition?	+			According to the DED, the WSS construction is planned only on municipal land.
Is there any estimate of the likely number of persons/organizations that will be displaced as a result of the Project?	+			According to the DED, the project will not involve the displacement of people and organizations.
Is land available for mobilization of materials or transportation for construction works on the existing site (right-of-way/bypass road)? If not, provide details of the location of this land plot, availability, etc.	+			After signing the contract for the construction of the WSS, Aiyl Okmotu will allocate plots for the base and warehouses of contractors.
Will the project potentially include temporary or permanent and full or partial physical relocation? (Specify in the notes what type of displacement is assumed).				There are no displacement issues, according to the RPF and Assessment.
Will the Project potentially involve temporary or permanent and full or partial economic displacement (e.g., loss of assets or access to resources due to land acquisition/gift or access restrictions - even in the absence of physical resettlement)? (Specify in the notes what type of displacement is assumed).		-		No

Is there any impact on illegal land use practices? Are there any people without legal title who live/have businesses on the proposed project areas/sites that will be used for construction work? If yes, provide details of temporary or permanent impact on them in the "Notes" section?		-		No
If the site is in private ownership, can this land be acquired through negotiation?		-		The land for the WSS CIW is in municipal ownership.
Will the landowners provide land for the project?		-		No
Will there be a loss of housing and/or residential land due to land acquisition/gift?		-		No
Will there be a loss of any productive assets due to land acquisition/gift?		-		No
Will there be loss of crops, trees and fixed assets due to land acquisition/gift?		-		No
Will there be a loss of business or enterprises due to the acquisition/gift of land?		-		No
Will there be loss of income sources and livelihoods due to land acquisition/gift under the subproject?		-		No
Will any social or economic activities be affected by land use-related changes?		-		No
Will people lose access to natural resources, communal facilities, services or other assets as a result of land acquisition/gift or project implementation? Provide details in the comments.		-		No
Would the project result in land use restrictions and/or servitude rights? Provide details in the comments.		-		No
Will access to public or government owned land and resources be restricted?		-		No
Is there a territorial dispute between two or more countries over the subproject area, its subsidiary aspects and related activities?		-		No
Have there been any previous land acquisitions and the identified land has already been acquired? Provide details in the "Note" section.		-		No
Is land acquisition taking place under this project but without World Bank financing? Provide details in the "Note" section		-		No
Data on vulnerable groups				
Is there any estimate of the likely		-		Vulnerable categories of

number of vulnerable groups/individuals that will be displaced as a result of the Project?				groups/individuals are not expected to be displaced under this subproject.
Are there poor women heads of households or vulnerable to the risk of poverty? Provide some evaluation.		-		No
Whether the subproject is located in any vulnerable/sensitive areas, social facilities such as a residential area or school, or near them as well as the availability of municipal services (irrigation, drinking water, sewerage and waste collection services)?				
Is the subproject located in or near any known cultural heritage sites?		-		No
Gender				
Is there likely to be an impact on gender equality and/or the situation of women and girls?		-		No
Will the Project potentially reproduce gender discrimination against women, especially with regard to access to assets, opportunities and benefits?		-		No
Whether the Project will potentially limit women's ability to use, develop and protect natural resources, taking into account the different roles and positions of women and men in accessing environmental goods and services?		-		No
Gender-based violence and sexual harassment				
Does the project site pose a significant risk of gender-based violence (GBV) and sexual exploitation and abuse (SEA)?				The project takes into account measures to manage gender-based violence through inclusion of the Code of Conduct section in the contracts of contracting organizations. Also, training and briefings on gender-based violence will be provided by the Project's Safeguards officers.
Is recruitment of foreign manpower expected for the subproject, which may result in manpower influx?				The winner will be known at the end of the contest. If the winner is a foreign company or a local company that will hire foreign manpower, the PIU staff will conduct explanatory work on the Code of Conduct for all employees, including foreigners.

GRM				
<p>Does the subproject have a grievance mechanism, including at the central level, to which all employees have access and which is designed to respond quickly and effectively?</p>				<p>The mechanism for addressing /appeals of citizens affected during the Project implementation period and providing appropriate responses on social and environmental safety measures and gender issues will be implemented according to the following three levels, i.e. grievance commissions will be established at all levels:</p> <ul style="list-style-type: none"> • at the subproject level; • at the local level (AO); at the central level (SIDWSWD).
<p>Decision on categorization. After review of the above answers, the subproject social category is determined as <i>Moderate</i></p>				

**CODE OF CONDUCT TO BE OBSERVED BY THE CONTRACTING ORGANIZATION
(HEREINAFTER REFERRED TO AS THE CONTRACTOR)**

Code of Conduct for Contractor Personnel: Form

We, the contractor, [*enter Contractor's name*], have signed a contract with [*enter Employer's name*] for [*enter description of Work*]. These Works will be carried out at [*insert Site and other locations where the Works will be carried out*]. Our contract requires us to take measures to address the environmental and social risks associated with the Works, including the risks of sexual exploitation, sexual violence and sexual harassment.

Note:

The minimum content of the Code of Conduct form established by the Employer shall not be materially altered. However, the Contractor may add requirements as necessary, including to address issues/risks associated with the Contract.

This Code of Conduct is part of our measures to address the environmental and social risks associated with our operations. It applies to all of our personnel, employees and others employed on the construction site or elsewhere where work is being performed. It also applies to the employees of each subcontractor and any other personnel assisting us in the performance of the Work. All such persons shall be referred to as "Contractor Personnel" and shall be bound by this Code of Conduct.

This Code of Conduct defines the behavior we require of all Contractor Personnel.

Our workplace is an environment where unsafe, abusive, angry or violent behavior is unacceptable and where all people should feel comfortable raising issues and not fearing punishment.

REQUIRED BEHAVIOR

The Contractor's personnel shall:

1. perform their duties with integrity and competence;
2. comply with this Code of Conduct and all applicable laws, regulations and other requirements, including requirements to protect the health, safety and welfare of other Contractor Personnel and any other person;
3. maintain a safe working environment, including by:
 - ensuring that workplaces, machinery, equipment and processes under everyone's control are safe and free from health hazards;
 - wearing the necessary personal protective equipment;
 - using appropriate measures for chemical, physical and biological substances and reagents; and
 - following applicable emergency operating procedures.
4. report work situations that he/she believes are unsafe or pose a health hazard, and to withdraw himself/herself from work that he/she reasonably believes poses an immediate and serious danger to his/her life or health; treat others with respect and do not discriminate against certain groups such as women, people with disabilities, migrant workers or children; not engage in sexual harassment, which means unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature with other Contractor or Employer personnel;

5. not to engage in sexual exploitation, which means any actual or attempted abuse or misuse of a position of vulnerability, inequality of position or trust for sexual purposes, including but not limited to obtaining monetary, social or political advantage from the sexual exploitation of another person;
6. not to participate in forced sexual activity, which means actual coercion or coercion of a sexual nature by physical force, under unequal or coercive conditions;
7. not engage in any form of sexual activity with anyone under the age of 18, unless previously married;
8. attend appropriate training courses to be conducted on the environmental and social aspects of the Contract and to include health and safety, sexual exploitation and abuse and sexual harassment;
9. report violations of this Code of Conduct; and
10. not retaliate against any person who reports violations of this Code of Conduct, whether to us or to an employer, or who utilizes the grievance mechanism provided for contractor personnel or the project grievance mechanism.

RAISING CONCERNS

If any person witness's behavior that he/she believes may constitute a violation of this Code of Conduct, or that otherwise concerns him/her, he/she should raise the matter immediately This can be done in one of the following ways:

1. Contact [*enter the name of the PIU Specialist on Social Issues with relevant experience in handling cases of sexual exploitation, sexual abuse and sexual harassment, or, if such a person is not required by the Contract, another person designated by the Employer to handle these matters*] in writing at the following address [] or by telephone [] or in person at []; or
2. Call [] to the Employer's hotline (*if available*) and leave a message

A person's identity will be kept confidential unless suspected involvement is provided for under the laws of the country.

Anonymous complaints or claims may also be made and will be given due and appropriate attention. We take all reports of possible misconduct seriously and will investigate and take appropriate action. We will provide guidance and additional information to service providers who can help support the person experiencing the alleged incident, as appropriate.

No penalty will be imposed against any person who in good faith reports any conduct prohibited by this Code of Conduct. Such punishment will be a violation of this Code of Conduct.

CONSEQUENCES OF VIOLATING THE CODE OF CONDUCT

Any violation of this Code of Conduct by Contractor Personnel may result in serious consequences, up to and including termination of employment and possible referral to law enforcement authorities.

FOR THE CONTRACTOR'S PERSONNEL:

I have received a copy of this Code of Conduct written in a language I understand. I understand that if I have any questions about this Code of Conduct, I may contact [*enter the name of the Customer's contact person(s) with relevant experience*] to request clarification.

Name of Contractor's employee: [*insert full name*]

Signature _____

Date: (day/month/year): _____

Counter-signature of the Contractor's authorized representative:

Signature _____

Date: (day/month/year): _____

Behaviors that constitute sexual exploitation and abuse (SEA) and behaviors that constitute sexual harassment (SH).

**BEHAVIOR THAT CONSTITUTES SEXUAL EXPLOITATION AND ABUSE AND
BEHAVIOR THAT CONSTITUTES SEXUAL HARASSMENT**

The following is a partial list of prohibited behaviors.

(1) **Examples of sexual exploitation and abuse** include, but are not limited to, the following:

- Contractor personnel inform a local resident that he/she can obtain work related jobs (e.g., cooking and cleaning) in exchange for sexual favors.
- Contractor personnel who connect households to the electricity grid say they can connect female-headed households to the grid in exchange for sexual favors.
- Contractor personnel raping or otherwise subjecting a local resident to violent sexual acts.
- Contractor personnel will deny a person access to a construction site if they are not providing a sexual service.
- Contractor personnel inform the person applying for work under the Contract that he/she will only hire him/her if he/she has sex with him/her.

(2) **Examples of sexual harassment in the work context**

- Contractor Personnel make comments about other Contractor Personnel's appearance (positively or negatively) and sexual attractiveness.
- When Contractor Personnel complain about another Contractor Personnel's comments about his/her appearance, the other Contractor Personnel responds by saying that he/she is "provoking him/her to do so" because of the way he/she dresses.
- Unwanted touching of Contractor or Employer Personnel by other Contractor Personnel.

The Contractor's Personnel informs the other Contractor's Personnel that he/she will receive a pay raise or promotion if he/she sends him/her nude photos of himself/herself.

Annex 4. Asbestos-containing materials management plan (example)

Applicability

The Asbestos Containing Materials Management Plan (ACMMP) applies to all construction or reconstruction sites and any related areas. Contractors employed by Project are legally responsible for their construction sites and related areas and must follow the provisions of the Project ACMMP within those locations. Specifically, this procedure must be used to ensure the safe handling, removal and disposal of any and all Asbestos Containing Materials (ACM) from those areas.

Immediate action

On discovering ACM on a Project site, the contractor must:

- Stop all work within a 5 m radius of the ACM and evacuate all personnel from this area;
- Delimit the 5 m radius with secure fencing posts, warning tape and easily visible signs warning of the presence of asbestos;
- If the site is in an inhabited area, place a security guard at the edge of the site with instructions to keep the general public away;
- Notify the PIU Safeguards Specialist and arrange an immediate site inspection.

Equipment

To remove asbestos from a construction site, contractors must provide the following equipment:

- Warning tape, sturdy fence posts and warning notices;
- Shovels;
- Water supply and hose fitted with a garden type spray attachment;
- Bucket of water and rags;
- Sacks of clear, strong polythene that can be tied to close;
- Asbestos waste containers (empty, clean, sealable metal drums, clearly labelled as containing asbestos).

Personal Protective Equipment (PPE)

All personnel involved in handling ACM must wear the following equipment, provided by the contractor:

- Disposable overalls with a hood;
- Boots without laces;
- New, strong rubber gloves;
- A respirator is not normally required if there are only a few pieces of ACM in a small area, and if the ACM is damp;
- There must be no smoking, eating or drinking on a site containing ACM.

Decontamination Procedure 1: Removing small pieces of ACM

- Identify the location of all visible ACM and spray each lightly but thoroughly with water;
- Once the ACM is damp, pick up all visible ACM with shovels and place in a clear plastic bag;
- If ACM debris is partially buried in soil, remove it from the soil using a shovel and place it in the plastic bag;
- Insert a large label inside each plastic bag stating clearly that the contents contain asbestos and are dangerous to human health and must not be handled;
- Tie the plastic bags securely and place them into labelled asbestos waste containers (clean metal drums) and seal each drum;
- Soil that contained ACM debris must not be used for backfill and must instead be shovelled by hand into asbestos waste containers;
- At the end of the operation, clean all shovels and any other equipment with wet rags and place the

bags into plastic disposal bags inside asbestos waste containers.

Decontamination Procedure 2: Removing ACM-contaminated backfill

- If soil containing ACM debris has inadvertently been used for backfill this must be sprayed lightly with water and shovelled out by hand to a depth of 300 mm and placed directly into asbestos waste containers (i.e. not stored temporarily beside the trench);
- Any ACM uncovered during the hand shovelling must be placed in a clear plastic bag;
- Once the trench has been re-excavated to 300 mm, if there is no visible ACM remaining, the trench may be refilled by excavator using imported clean topsoil.

Disposal

ACM should be disposed of safely at a local hazardous-waste disposal site if available, or at the city municipal dumpsite after making prior arrangement for safe storage with the site operator.

- The Contractor must arrange for the disposal site operator to collect the sealed asbestos waste containers as soon as possible and store them undisturbed at the disposal site.
- At the end of construction Contractors must arrange for the disposal site operator to bury all ACM containers in a separate, suitably-sized pit, covered with a layer of clay that is at least 250 mm deep.

a) Personal Decontamination

At the end of each day, all personnel involved in handling ACM must comply with the following decontamination procedure:

- At the end of the decontamination operation, clean the boots thoroughly with damp rags;
- Peel off the disposable overalls and plastic gloves so that they are inside-out and place them in a plastic sack with the rags used to clean the boots;
- If a disposable respirator has been used, place that in the plastic sack, seal the sack and place it in an asbestos waste container;
- All personnel should wash thoroughly before leaving the site, and the washing area must be cleaned with damp rags afterwards, which are placed in plastic sacks as above.

b) Clearance and Checking-Off

- The decontamination exercise must be supervised by site supervisors (engineering or environmental).
- After successful completion of the decontamination and disposal, the Contractor should visually inspect the area and sign-off the operation if the site has been cleaned satisfactorily.
- The contractor should send a copy of the completion notice to the PIU, with photographs of the operation in progress and the site on completion.

Training

PIU Environmental Specialist may hire the specialized companies to conduct training on ACCMP implementation for Contractors staff and PIU on the implementation of ACCMP. The training will include a session focusing on ACM, which covered:

- Risks of contact with ACM;
- Responsibilities for dealing with ACM on project's construction sites;
- The Project's ACMMP and the Protocol for site clean-up;
- Awareness-raising for the contractor staff.

Cost estimate

Costs incurred by contractors in implementing the ACMMP are included in their budget in ESMP budget.