

Rural Infrastructure Development Project

**Republic of Uzbekistan**

**Rural Infrastructure Development Project**

**Environmental and Social Management Plan**

Construction of Water Supply in Pshagar Rural  
Citizens' Assemblies of Zomin district of Jizzak  
region

Tashkent 2022

Subproject: Construction of Water Supply in Pshagar Rural Citizens' Assemblies of Zomin district of Jizzak  
region

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### LIST OF ABBREVIATIONS

AIIB	Asian Infrastructure Investment Bank
AP	Affected Person
ARAP	Abbreviated Resettlement Action Plan
CE	Civil Engineer
CSC	Construction Supervision Consultant
DSEI	Draft Statement of the Environmental Impacts
EA	Executive Agency
EIA	Environmental Impact Assessment
ESA	Environmental and Social Assessment
ESHS	Environmental, Social Health, and Safety
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
F&L	Fuel and Lubricants
FS	Feasibility Study
GoU	Government of Republic of Uzbekistan
GRM	Grievance Redress Mechanism
LLC	Limited Liability Company
LRSCD	Land Resources and State Cadaster Department
MIFT	Ministry of Investments and Foreign Trade
NMSCP	National Medium-Size Cities Program
PIU	Project Implementation Unit
RPIU	Regional Project Implementation Unit
SEC	Statement on Environmental Consequences
SEE	State Environmental Expertise
SEI	Statement of the Environmental Impacts
SS	Safety Specialist
SSESMP	Site-Specific Environmental and Social Management Plan
WB	World Bank
WT	Water Tower

## 1 PROJECT INFORMATION

<b>INSTITUTIONAL &amp; ADMINISTRATIVE ARRANGEMENTS</b>				
Country	Uzbekistan			
Project title	The Rural Infrastructure Development Project			
Scope of project and activity	The objective of Water Supply Project in RCA Pshagar is to improve drinking water supply to rural population of RCA Pshagar of Zomin district of Jizzak region. The main activities under the current project are: new construction of drinking water supply system infrastructure; institutional strengthening of the potential of project District Water Supply Organization; proposing measures on strengthening of commercial structure of District Water Supply Organization.			
Institutional arrangements (names and contacts)	<b>WB (Project Team Leader)</b>	<b>Project Management</b>	<b>Local Counterpart and/or Recipient</b>	
		Project Implementation Unit (PIU) under the Ministry of Economic Development and Poverty Reduction of the Republic of Uzbekistan	Hokimiyat of Jizzak region Hokimiyat of Zomin district	
Implementation arrangements (Name and contacts)	<b>Safeguard Supervision</b> PIU Env. Safeguard Specialist PIU Social Safeguard Specialist	<b>Local Counterpart Supervision</b> RPIU Facilitator	<b>Local Inspectorate Supervision</b> "JIZZAX TADQIQOT" LLC	<b>Contactor</b> To be determined after tender
<b>SITE DESCRIPTION</b>				
Name of site	<b>Monguzar, Saychi and Adrobod streets of RCA Pshagar of Zomin district of the Jizzak region</b>			
Describe site location	Zomin district is located in the southeastern part of the Jizzakh region. From the north it borders on the Syrdarya region, from the south - with the Bakhmal district of the Jizzakh region and the Sughd region of the Republic of Tajikistan, from the east - with the Yangiabad district of the Jizzakh region and the Sughd region of Tajikistan, from the west - with the Zarbdar and Jizzak districts of the Jizzak region. The RCA Pshagar is located in the western part of Zomi district at the foot of the arid zone of the northern part of the Turkestan ridge. Altitude increases from north to south. Figure 3 depicts the location of RCA Pshagar in the Zomin district.			
Who owns the land?	<b>Hokimiyat of Zomin district</b>			
Geographic description	Geographic coordinates of the points of the territory of Water Distribution Facilities: 1) Monguzar WT&Well – 39°56'54.43"N 68° 7'34.16"E; 2) Soychi WT – 39°57'17.75"N 68° 7'17.08"E; 3) Soychi Well – 39°57'27.80"N 68° 7'18.55"E; 4) Adrobod WT – 39°57'42.00"N 68° 8'24.65"E.			

## 2 INTRODUCTION

1. In order to implement the Decree by the President of the Republic of Uzbekistan #PP-4898 as of 25 November 2020 it is necessary to implement the Project on Improvement of Water Supply System in Pshagar Rural Citizens' Assemblies (RCA) of Zomin district of Jizzak region. The Project is a part of the Rural Infrastructure Development Project to be implemented during the period of 2020-2024 and approved together with World Bank.

2. The Rural Infrastructure Development Project (RIDP, the “Project”) is an initiative of the GoU that promotes participatory, village-based development to reduce infrastructure and service-delivery gaps. The RIDP is based on the principles of community-driven decision-making, outreach to and inclusion of the poor and vulnerable within communities, gender equity, and transparency and accountability. Using a learning-by doing approach, the RIDP will trial design adjustments aimed at increasing community participation in project decision-making and oversight, transparency and accountability in project implementation, and the quality and sustainability of subproject investments that can be replicated and scaled up through other state programs.

3. The RIDP is implemented by the MoED with support from the World Bank (WB) and the Asian Infrastructure Investment Bank (AIIB). The development objective of the RIDP is to (i) improve the quality of basic infrastructure, and (ii) strengthen participatory local governance processes in selected qishloqs, where “participatory local governance” refers to inclusive village participation in needs assessments; the planning, prioritization, and selection of subproject investments; and oversight activities including the monitoring of procurement, subprojects, and social audits. To increase participation and village-led decision-making and oversight, a key design innovation introduced under the RIDP is the provision of facilitation support to participating district administrations and qishloqs in the form of trained Qishloq Facilitation Teams.

4. The implementation of the proposed Water Supply Project in Zomin district is triggered by the necessity to find solutions for the problems related to drinking water supply of rural population of RCA Pshagar.

5. The Project will be implemented with the purpose of strengthening of social security of population as well as for implementation resources preserving policy, improvement of drinking water supply infrastructure and provision of effective functioning and preserving optimal level of tariffs for services rendered by the water supply enterprises.

6. The ESMP for the subproject was prepared on the basis of the working draft documents and “Draft Statement of the Environmental Impacts” document, which was prepared by “EKOLOGIYA” LLC, approved by “JIZZAX TADQIQOT” LLC and submitted to State Environmental Expertise. The conclusion (No. 358-Э of 08/10/2021) of the State Environmental Expertise was issued for the prepared EIA (See Annex 1).

7. The objective of Water Supply Project in RCA Pshagar is to improve drinking water supply to rural population of RCA Pshagar of Zomin district of Jizzak region. The main activities under the current project are: new construction of drinking water supply system infrastructure; institutional strengthening of the potential of project District Water Supply Organization;

proposing measures on strengthening of commercial structure of District Water Supply Organization; study of environmental and social issues.

8. The present ESMP for the Subproject of the project "Construction of Water Supply in Pshagar Rural Citizens' Assemblies of Zomin district of Jizzak region" is prepared based on ESMF and performed Environmental Screening Procedure (Annex 2).

## **2.1 The Environmental and Social Management Plan (ESMP)**

9. This ESMP has been prepared based on an overall environmental and social assessment, which included (i) analysis of the general information in subproject area; (ii) evaluation of potential environmental and social impacts of the project components and subcomponents; (iii) assessment of environmental requirements and practices in different ongoing and completed projects; (iv) national requirements by the Government of Uzbekistan for implementation of similar subprojects; (v) World Bank Safeguard requirements before implementation of any development project, and, (vi) consideration of several other international and regional regulations for implementation of development projects. The ESMP has identified various impacts, both positive and negative and provides the guidelines for the mitigating the impacts.

## **2.2 The purpose of the ESMP and its objectives**

10. It is a requirement by both the Government of Uzbekistan and World Bank (WB) that environmental and social assessments are carried out at the identification, preparation or appraisal stages of any development project. The main objective of this ESMP is to ensure that the implementation of the Construction of Water Supply in Pshagar Rural Citizens' Assemblies Subproject in Zomin district of the Jizzak region meets the requisite environmental and social impacts legal, regulatory and policy frameworks and, is implemented with the environmental and social sustainability in mind and are determined well in advance. The ESMP provides the plan that will enable project implementers to mitigate potential environmental and social impacts of the project activities. The specific objectives of ESMP are: (i) To establish clear procedures and methodologies for the environmental and social screening, planning, review, approval and implementation of sub-projects to be financed under the Project; (ii) To identify potential and possible environmental and social impacts associated with the proposed project components and propose appropriate mitigation measures for the impacts caused by implementation of the project activities; (iii) To specify appropriate roles and responsibilities, and outline the necessary reporting procedures, for managing and monitoring environmental and social concerns related to the project; (iv) To determine the training, capacity building and technical assistance needed to successfully implement the provisions of the ESMP; (v) To propose and establish the funding required to implement the ESMP and subsequent environmental and social assessments, monitoring and management; (vi) Provide support to relevant implementing local authorities to review plans and determine if additional, more detailed environmental or social planning is required before applications can be approved; and, (vii) To provide practical information for implementing the ESMP.

11. The Project Implementation Unit (PIU) under the Ministry of Economic Development and Poverty Reduction will be based in Tashkent. Also there is a Regional PIU established in Jizzak region who is expected to work in joint collaboration with the State Committee on Ecology and Environmental Protection (Goskomecologiya) and other relevant authorities in Jizzak region and will ensure compliance with this ESMP.

### **2.3 Preparation and use of ESMP**

12. This ESMP was prepared by “JIZZAX TADQIQOT” LLC and submitted by the PIU. The ESMP provides a guide to be used within existing Government Policy regulations for environment and social processes and other international legislation by donor organizations. This ESMP will be a living document that will be subject to periodic reviews to address specific concerns raised by stakeholders, and emerging policy requirements.

## **3 ADMINISTRATION, POLICIES, LEGAL AND REGULATORY FRAMEWORKS**

### **3.1 The Nature Protection Normative Documents.**

13. A legal basis in the sphere of protection and the use of environment has been established in Uzbekistan, which is aimed at guaranteeing rights and duties stipulated by Articles 50 and 55 of the Constitution of the Republic of Uzbekistan. These are over than 20 laws, approximately 50 decrees of the President and of the Cabinet of Ministers of the Republic of Uzbekistan as well as other subordinate acts and normative documentation.

14. With regard to the present project, the following basic legal acts are acting at present in Uzbekistan that are directed to provide environment protection, guaranteeing public healthcare as well as managing the environment protection sector, namely Laws of the Republic of Uzbekistan:

- «On the protection of the environment» (1992);
- «On water and water use» (1993);
- «On the State Environmental Expertise» (2000);
- «On the State sanitary epidemiological supervision in the Republic of Uzbekistan» (1992);
- «On the protection and use of objects of cultural heritage» (2001);
- «On special protected areas» with amendments (30.08.93);
- «On protection and use of flora» (as of 26 December 1997);
- «On protection and use of fauna» (as of 26 December 1997);
- «On protection of atmospheric air» (as of 27 December 1996);
- «On wastes» as of 05/04/2002;
- «On protection of the population and areas from emergency situations of natural and anthropogenic character» as of 20/08/1999.

15. The key acting subordinate acts and normative documents adopted by the Government of Uzbekistan in the sphere of environment protection are as follows:

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- “On the Further Improvement of the Environmental Impact Assessment Mechanism” (No 541, 7/09/2020);
- “On Improvement of the Environmental Monitoring System in the Republic of Uzbekistan” (No 737, 5/09/2019);
- “On assigning the status of special protected areas to zones of sources formation of fresh ground waters” (No 302, 26/08/2002);
- "On Approval of the Regulations on the Order of Establishment of Water Protection Zones and Sanitary Protection Zones of Water Bodies in the Territory of the Republic Of Uzbekistan" (No 981, 11/12/2019);
- "On Measures for Further Improvement of Economic Mechanisms to Ensure the Protection of Nature" (No 820, 11/10/2018);
- "On The Further Improvement of Economic Mechanisms of Environmental Protection in the Territory of the Republic of Uzbekistan" (No 202, 12/04/2021);
- "On Approval of Some Administrative Regulations for Rendering Public Services in the Sphere of Natural Use" (No 255, 31/03/2018);
- "On Approval of the Instructions for Conducting Inventory of Pollution Sources and Regulation of Emissions of Pollutants into the Atmosphere for Enterprises of the Republic Of Uzbekistan" (No 105, 15/12/2005);
- State Standard - Water quality. O’z DST 951:2011 – Sources of centralized household water supply. Hygienic, technical requirements and classification code;
- State Standard - Drinking water. O’z DST 950:2011 – Drinking water. Hygienic requirements and quality control;
- State standard O’z DSt 1057:2004 “Vehicles. Safety requirements for technical conditions” and O’z DSt 1058:2004 “Vehicles. Technical inspection. Method of control”;
- SanR&N RUz No.0255-08 “Main criteria for the hygienic assessment of the degree of pollution of water bodies in terms of danger to public health in Uzbekistan”;
- SanR&N RUz No. 0179-04 Hygienic norms. List of Maximum Allowable Concentrations (MACs) of pollutants in ambient air of communities in the Republic of Uzbekistan including Annex 1;
- SanR&N RUz No. 0233-07 Sanitary norms and regulations for occupational health and environmental protection in the production and use of asbestos-containing products;
- SanR&N RUz No. 300-11 Sanitary rules and regulations for the collection, inventory, classification, disposal, storage and disposal of industrial waste in Uzbekistan;
- SanR&N RUz No. 0267-09 Admissible noise level into the living area, both inside and outside the buildings;
- SanR&N RUz No, 0120-01 Sanitarian Norms of allowed level of noise at the construction sites;
- SanR&N RUz No. 0202-06. The procedure for issuing permits for special water use, development and approval of projects of maximum permissible discharges (MPD) of substances entering with wastewater into water bodies and on the terrain;
- KMK (Construction norms and rules) 2.04.02-19 “Water Supply. External network and facilities”;

- Decree of the Cabinet of Ministers of the Republic of Uzbekistan on Approval of the collection and disposal of used mercury-containing lamps. No. 266 of 21.09.2011;
- SanR&N RUz No. 0233-07 On occupational health and environment protection during production and usage of asbestos contained materials;
- SanPiN RUz No. 0372-20 (new edition) Temporary sanitary rules and norms for organizing the activities of state bodies and other organizations, as well as business entities during the application of restrictive measures during the COVID-19 pandemic.

16. The key acting subordinate acts and normative documents adopted by the Government of Uzbekistan in the sphere of Social and Resettlement issues are as follows:

- The Land Code (dated on April 30, 1998 with the latest changes from December 23, 2020);
- The Civil Code (CC);
- The Town Planning Code (January 06, 2021);
- Resolution of Cabinet of Ministers # 146 (May 25, 2011) (with revisions dated June 14, 2019);
- Resolution of the Cabinet of Ministers "On additional measures to improve the procedure for providing compensation for the seizure and provision of land and ensuring guarantees of property rights of individuals and legal entities" ( November 16, 2019 # 911);
- Resolution of the Government of Uzbekistan "On Measures on Improvement Efficiency of Preparing and Implementation of Projects funded by International Financial Institutions and Foreign Governmental Financial Organizations" (July 16, 2018 , # 3857);
- Resolution of the Government of Uzbekistan "About Approval of the Procedure of Accumulating and Use of Funds of Centralized Stocks for Compensation of Damages to Individual Persons and Legal Entities Due to Acquisition of Lands for Public Needs»( December 26, 2018, # 1047);
- Resolution of the President "About the Measures for Fundamental Improvement of Urbanization Processes" (January 10, 2019 # 5623);
- Resolution of the President of Uzbekistan "About the Measures for Basic Improvement of Investment Climate in the Republic of Uzbekistan". ( August 1, 2018 # UP-5495).

### **3.2 National EIA rules and procedures.**

17. The national Environmental Impact Assessment (EIA) procedure is regulated by Law on Environmental Expertise and The Regulation on State Environmental Expertise (SEE) approved by Cabinet of Ministry Decree No.541 dated from 7 September 2020. The regulation defines the legal requirements for EIA in Uzbekistan. SEE is a review process conducted by the Center for SEE ('Centrgosecoexpertiza') under Goskomecologiya at either the national or the regional level, depending on the project category.

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18. Goskomecologiya on state environmental expertise is a uniform system of Center for Environmental Expertise, methodological guidance of which implemented by Centrgosecoexpertise.

19. According to Section 21 of the Regulation on SEE, an application for the submission of EIA ('OVOS' is the national acronym) materials to the State Environmental Expertise is submitted by the customer through the personal account of the State Committee for Environmental Protection on the Internet in the Global information network of the State Environmental Committee.

20. The types of activities of I and II categories of environmental impact are pre-project and are subject to State Environmental Expertise, if the project documentation is confirmed in the prescribed manner at public consultations. The procedure for holding public consultations is given in Appendix 3 of this Resolution of the Cabinet of Ministers No. 541 of September 7, 2020.

21. Section 24 of the Regulation on SEE outlines the information that should be within the documentation at each of these stages. The three OVOS stages and their required deliverables are summarized as follows:

- Stage I: The 'Draft Statement of the Environmental Impacts (DSEI)' ('PZVOS' is the national acronym), to be conducted at the planning stage of the proposed project prior to development funds being allocated.
- Stage II: The 'Statement of the Environmental Impacts (SEI)' ('ZVOS' is the national acronym), to be completed where it was identified by the Glavgosecoexpertiza/Gosecoexpertise at Stage I that additional investigations or analyses were necessary. The Statement must be submitted to the Glavgosecoexpertiza/Gosecoexpertise before approval of the project's feasibility study, and therefore before construction.
- Stage III: The 'Statement on Environmental Consequences (SEC)' ('ZEP' is the national acronym) represents the final stage in the SEE process and is to be conducted before the project is commissioned. The report details the modifications to the project design that have been made from the Glavgosecoexpertiza/Gosecoexpertise review at the first two stages of the EIA process, the comments received through the public consultation, the environmental norms applicable to the project and environmental monitoring requirements associated with the project and principal conclusions.

22. SEE approval (Centrgosecoexpertiza/Gosecoexpertise opinion) is a mandatory document for project financing by Uzbek banks and other lenders (Section 18) at Stages I and II and for project commissioning at Stage III of the national EIA procedure.

23. All economic activities subject to SEE are classified into one of four categories:

- Category I — "high risk of environmental impact" (SEE is conducted by the national Glavgosecoexpertiza within 10 days, all EIA materials are required);
- Category II — "medium risk of environmental impact" (SEE is conducted by the national SNPC within 7 days, all EIA materials are required);
- Category III — "low risk of impact" (SEE is conducted by regional branches of (Gosecoexpertise) within 5 days, all EIA materials are required); and

- Category IV – “low impact” (SEE is conducted by regional branches of Gosecoexpertise within 3 days, only a questionnaire form is required).

### **3.3 The World Bank Safeguards Policies and Environmental and Social Assessment Requirements**

24. **Main provisions of the Environmental and Social Assessment.** Per the WB safeguards policies Environmental and Social Assessment (ESA) is a process of the pre-implementation stage which evaluates a project’s potential environmental and social risks and impacts in its area of influence; examines project alternatives; identifies ways of improving project selection, siting, planning, design, and implementation by preventing, minimizing, mitigating, or compensating for adverse environmental impacts and enhancing positive impacts; and includes the process of mitigating and managing adverse environmental impacts throughout project implementation. ESA is mandatory for projects, which may potentially have negative impacts. Furthermore, a well-organized public participation is mandatory in all the stages of the process. In the case when the projects activities to be financed are not identified at the design stage, the Bank applies an Environmental and Social Management Framework (ESMF), which should: provide details on procedures, criteria and responsibilities for subproject screening, preparing, implementing and monitoring of subproject specific ESIA and ESMPs.

25. **World Bank Screening Categories and Environmental Assessment Procedures.** Environmental Screening is a Mandatory Procedure OP/BP 4.01 on Environmental Assessment. The Bank undertakes environmental screening of each proposed project for which it will provide funding to determine the appropriate extent and type of the Environmental Assessment to be conducted. The Bank classifies a proposed project into one of four categories, depending on the type, location, sensitivity and scale of the project and the nature and magnitude of its potential environmental impacts. These four Categories are A, B, C, and FI:

- Category A projects are likely to have significant adverse environmental impacts that are sensitive, diverse, or unprecedented.
- Category B projects has potential adverse environmental impacts on human populations or environmentally important areas - including wetlands, forests, grasslands, and other natural habitats - which are less adverse than those of Category A projects.
- Category C. An EIA or environmental analysis is normally not required for Category C projects because the project is unlikely to have adverse impacts; normally, they have negligible or minimal direct disturbances on the physical setting.
- Category FI. A Category FI project involves investment of Bank funds through a financial intermediary, in subprojects that may result in adverse environmental impacts.

## **4 CONSTRUCTION OF WATER SUPPLY IN RCA “PSHAGAR”**

### **4.1 Current State of Water Supply System**

26. The administratively designed object belongs to the RCA Pshagar, Zomin district, Jizzak region. See Figure 2.

27. At the present time, the projected part of the RCA Pshagar does not have a centralized water supply system. Part of the population of RCA Pshagar drilled several wells on their own for household needs that do not meet drinking water standards, and part of the population uses spring water.

28. The design and construction of the facility is envisaged on the basis of the Decree of the President of the Republic of Uzbekistan on measures to implement the "Rural Infrastructure Development" Project with the participation of the International Development Association of the World Bank and the Asian Infrastructure Investment Bank No. PP-4898 dated November 25, 2020.

### **4.2 Planning works**

29. The Construction of Water Supply in RCA Pshagar of Zomin district Project will involve the (i) construction of new wells, water towers with water treatment system, (ii) construction of water distribution networks. The WB identified this project as a Category B undertaking, meaning the requirement for the preparation of an ESMP. The original ESMP consultant carried out assessment to comply with undertake an environmental screening document for this Sub-project, and confirmed a similar conclusion that the Project should be categorized as a B project.

30. The working draft defines the following scope of work:

- drilling of wells in the amount - 2 pcs;
- installation of a water tower with a volume of 25 m<sup>3</sup> each in an amount - 2 pcs;
- installation of a transformer substation - 2 pcs;
- installation of the box "Cascade" – 2 pcs;
- fencing, gates and wickets;
- laying of polyethylene pipes with a length - 7.1 km;
- arrangement of water supply wells VK;
- device of shut-off valves.

31. In accordance with the working documentation, 3 streets (Soychi, Monguzar and Adrobod streets) to be provided with drinking water are part of the RCA Pshagar of the Zomin district. It is planned to drill 2 wells for Soychi and Monguzar streets. Providing the population with drinking water on Adrobod Street will be carried out from a well located on the territory of Monguzar Street. After decontamination, water will be supplied from the towers through a ring system of pipes to consumers. The developed design scheme provides for the laying of pipes only on existing rural roads, sidewalks and reserve lands, without affecting private property. See Figure 1.

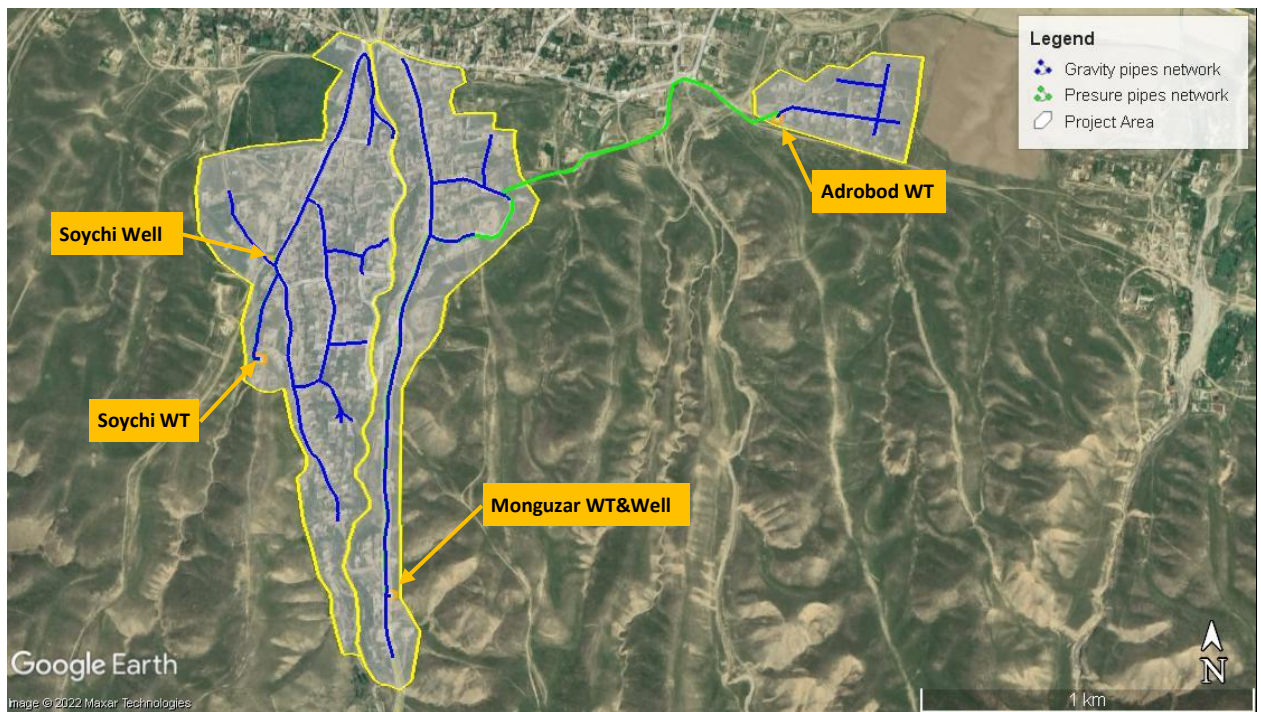
32. Parameters of the occupied area of the intake structure:

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- Total occupied Land area -  $900 \text{ m}^2 \times 4 = 3600 \text{ m}^2$
- Building area -  $20 \text{ m}^2 \times 2 = 40 \text{ m}^2$
- Hard surface area -  $100 \text{ m}^2 \times 2 = 200 \text{ m}^2$
- Landscaping area -  $780 \text{ m}^2 \times 3 = 2340 \text{ m}^2$

### 33. Trench parameters:

- Trench length – 7.1 km;
- Trench depth – 1.1 m;
- Trench width - 0.8 m.



**Figure 1. Water Supply System Scheme of RCA Pshagar**

### 4.2.1 Wells

34. Well construction includes: rotary drilling of a well, filter string and casing pipes, clay de-claying, backfilling of the annular space with gravel.

35. On the territory of water intake facilities the following is carried out:

- installation of a cascade house and a bactericidal installation.
- installation of water towers;
- installation of a transformer substation;
- laying of polyethylene pipes;
- arrangement of water supply wells VK;
- device of shut-off valves.
- fences, gates and wickets.

### **4.2.2 Water Towers**

36. The tower equipment consists of a pressure-distributing pipeline, overflow and drain pipes. From the pumping station through a pipeline, water enters the lower part of the tower support. The same pipeline serves to drain water from the tower to consumers. The overflow pipe ends at the highest water level in the tank. To allow complete emptying of the tower during flushing and repairs, a special mud pipe is laid from the lower part of the support.

37. To accommodate the necessary equipment, a well is arranged with a tower. In which on the water supply and downpipe are installed gate valves with a manual drive, and the end of the overflow pipe is released above the ground by sprinkling at a height of 3.2 m from the ground. from the well, the drain pipe is diverted with a rupture of the jet into a drain or an open ditch.

38. For the possibility of using the tower for fire extinguishing and water sampling, a riser is installed on the pressure distribution pipeline 70 mm in diameter with shut-off valves with two connecting heads. Filling the barrel of the tower with water makes it possible to lower the water horizon from the maximum level in the tank to the foot of the tower support, which creates a reserve supply of water consumed when the supply of electricity is cut off.

### **4.2.3 Building for water neutralization**

39. To disinfect water after wells, a house is being built. A bactericidal unit DUV - 1A500-NMST is installed inside the task.

40. Ultraviolet radiation has a high efficiency - 99.9% against a wide range of microorganisms: bacteria, viruses, spores and parasitic protozoa, including their chlorine-resistant forms. UV radiation destroys pathogens of infectious diseases such as typhoid, cholera, dysentery, salmonellosis, typhoid fever, viral hepatitis, etc.

41. The UV water disinfection method is safe. Unlike oxidizing technologies (chlorination, ozonation), after exposure to ultraviolet radiation, harmful organic compounds are not formed in water, even if the required dose is repeatedly exceeded. The absence of the risk of overdose simplifies the operation of the equipment. The use of UV disinfection makes it possible to reduce the amount of chlorine used by up to 5 times and to minimize the negative impact of the by-products of reagent methods on the health of children.

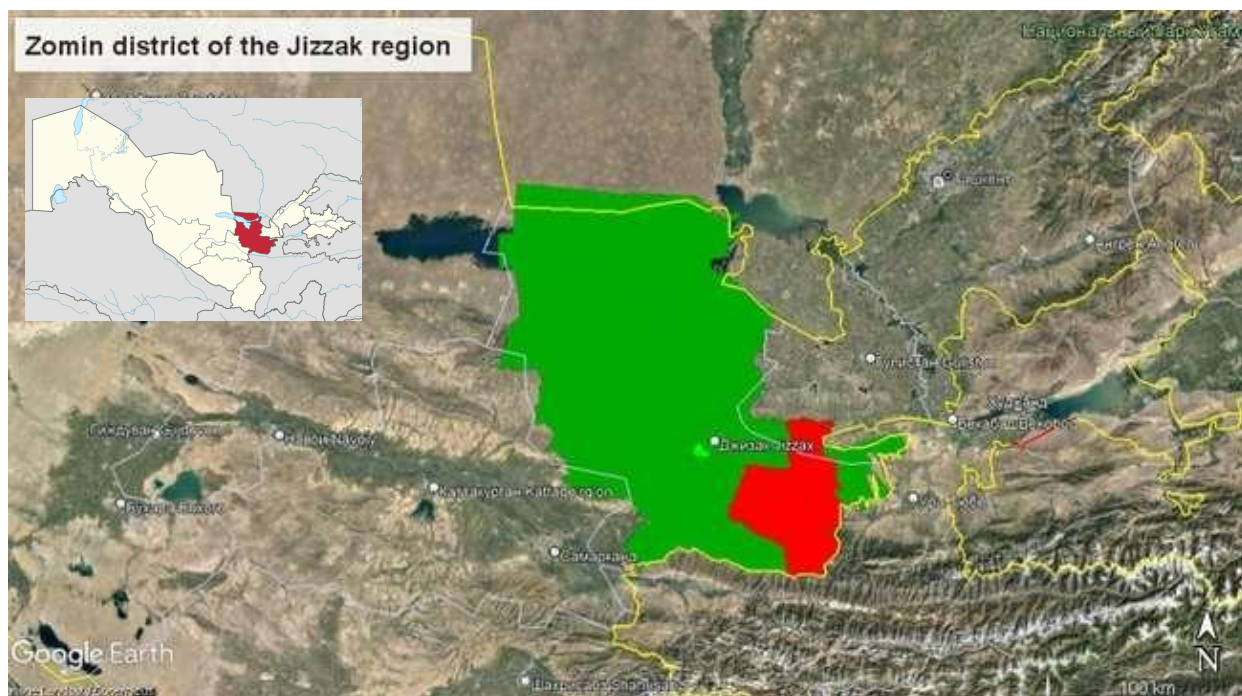
42. Ultraviolet acts only on microorganisms practically instantly (3-10 sec) and does not change the chemical composition and physical properties of water.

43. In UV systems DUV-N, the source of ultraviolet radiation is an amalgam lamp. The amalgam lamp does not contain liquid mercury, which guarantees safe use and easy disposal of the lamp.

## 5 ENVIRONMENTAL AND SOCIAL CONDITIONS

### 5.1 Geography and topography

44. Jizzak region is located in the center/east of the country. It borders with Tajikistan to the south and south-east, Samarqand Region to the west, Navoiy Region to the north-west, Kazakhstan to the north, and Sirdaryo Region to the east. It covers an area of 21,210 km<sup>2</sup>.



**Figure 2. Location of Jizzak region and Zomin District**

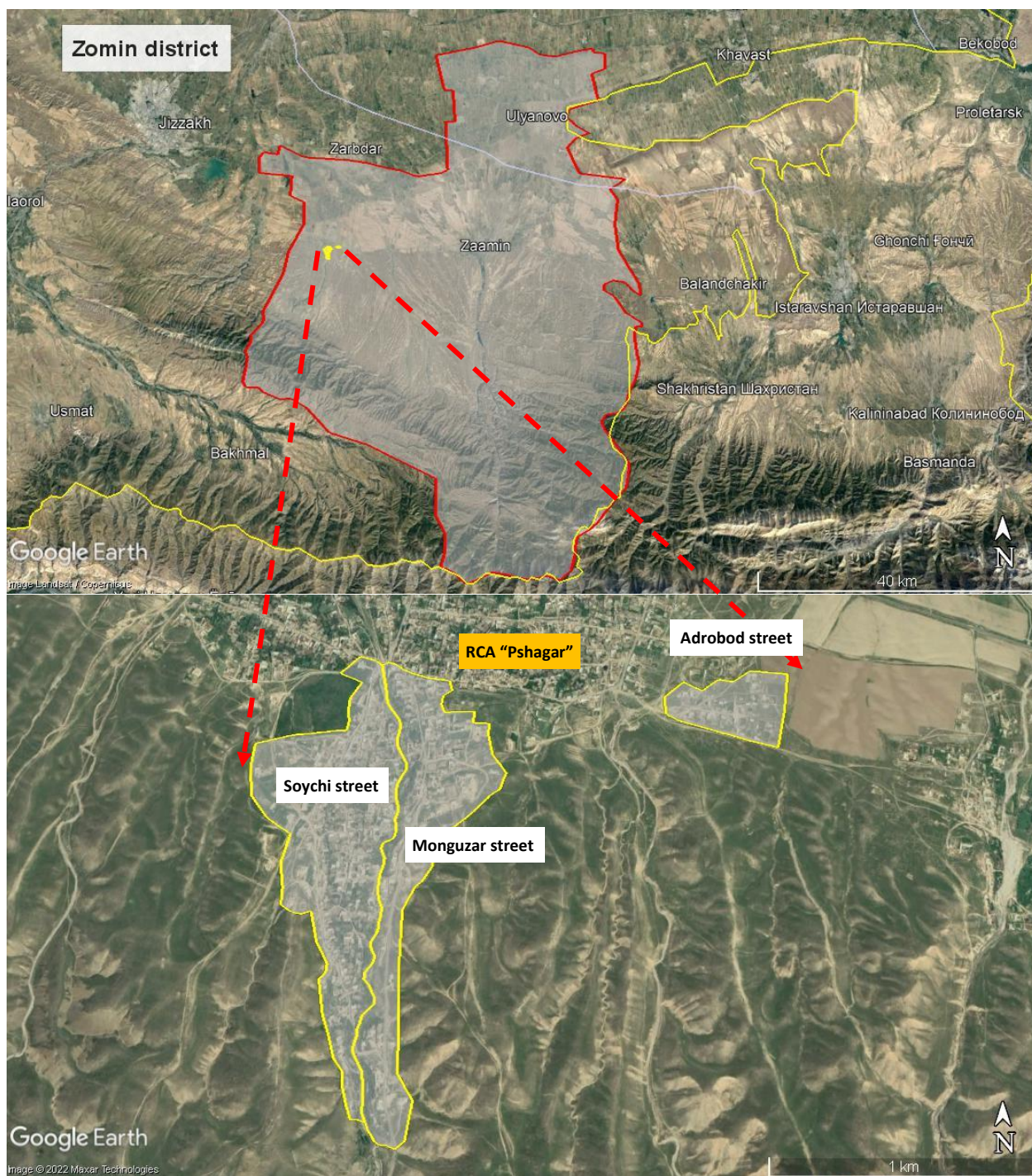
45. The population is estimated to be around 1,395.5 thousand people (as of 1st July 2020). The density of the population is 68.1 persons per km<sup>2</sup>. The regional capital is Jizzak city. The major towns include Dustlik, Gagarin, Gallyaaral (Gallaorol), Pakhtakor, and Mardjanbulak. Figure 2 depicts the location of Jizzak region in the territory of the country.

46. Zomin district is located in the southeastern part of the Jizzakh region. From the north it borders on the Syrdarya region, from the south - with the Bakhmal district of the Jizzakh region and the Sughd region of the Republic of Tajikistan, from the east - with the Yangiabad district of the Jizzakh region and the Sughd region of Tajikistan, from the west - with the Zarbdar and Jizzak districts of the Jizzak region.

47. The total area of the district is 2,663 km<sup>2</sup> and it is in second place (after Farish district) in the Jizzak region.

48. The northern, central and eastern parts of the Zomin region are occupied by lowlands, and in the southern and southwestern parts there are mountains and adyrs.

49. The RCA Pshagar is located in the western part of Zomi district at the foot of the arid zone of the northern part of the Turkestan ridge. Altitude increases from north to south. Figure 3 depicts the location of RCA Pshagar in the Zomin district.



**Figure 3. Location of RCA Pshagar in Zomin district of Jizzak region**

## 5.2 Climatic data

50. The climate of the Jizzak region is subtropical inland with a clearly pronounced seasonality. Winter (a period with an average daily temperature below 0 °C) lasts on average from the 3rd decade of November to the 2nd decade of March.

51. During the calendar winter, there may be short (3-8 days) periods of frost (with night temperatures down to -13 °C, less often up to -20 °C).

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52. The average January temperature is -1.5 °C, and the average July temperature is + 32 °C. There are frequent thaws throughout the winter, when the temperature rises from -5 °C to + 7 °C and higher, sometimes reaching values of +12 .. + 16 °C.

53. Transition seasons are short enough. Almost summer temperatures are often recorded in mid and late March, in April.

54. Summer (the period with daytime temperatures above + 20 °C and daily average above + 15 °C) lasts from the 2nd decade of April to the 3rd decade of October.

55. In June and July, daytime temperatures usually exceed 40 degrees (on average 20-40 days per summer season).

56. On average, 350-360 mm of precipitation falls on the territory of the region per year (the main part of precipitation is in spring and autumn). The growing season lasts 239-240 days.

### *Air Quality and Noise*

57. **Air Quality.** More recent ambient air quality data for Jizzak city is obtained from the Jizzak provincial center of sanitary and epidemiological welfare and public health. The data (Table 1) provided showed that most of the pollutants tested were within permissible standards.

**Table 1. Average annual atmospheric air analyze of the Jizzak city**

Parameters	2017		2018		2019		2020		Permitted concentrations (daily average) mg/m <sup>3</sup>
	No. of tests	Test results	No. of tests	Test results	No. of tests	Test results	No. of tests	Test results	
Ammonia	104	0.1 – 0.6	116	0.12 – 0.7	136	0.3 – 0.8	58	0.2 – 0.7	0.12
Nitrogen dioxide	108	0.02	111	0.019	126	0.018	42	0.015	006
Sulphur dioxide	108	0.032	111	0.041	126	0.029	42	0.025	0.02
Phenol	52	0.004	49	0.002	64	0.002	28	0.001	7.0
Anhydrous hydrogen fluoride	52	0.065	49	0.042	64	0.046	28	0.043	8.0

*Source: sanitary and hygienic laboratory of the Jizzak provincial center of sanitary and epidemiological welfare and public health, 2020*

58. Since this project will have no significant effect on air quality, the baseline data do not need to be extensive. During construction a few pieces of heavy equipment and trucks will be used to carry out the work. The dust control along the haul road in and out of the site, these temporary problems should be well controlled.

59. **Noise.** The noise level according to Jizzak Provincial Health Department averages around 50 dBA, well within the national standards in Uzbekistan which is 65-70 dBA in the day and 50 dBA at night (KMK 12.01.08-96).

### 5.3 Topography, Geology, Soils and Hydrology

60. Aside from the mountains on its eastern border, Jizzak province is a semi desert dryland, much of it in the Arnasy Depression, a flat expanse, which through vast irrigation has become an important dryland agriculture area. The eastern mountains are snow-capped and provide much of the local water in many small streams which, as soon as they reach lower elevation, are diverted for irrigation purposes.

61. Geomorphologic structure of these soils is loess (red)-like loam, interspersed with lenses of sand and gravel from 2 to 40 m thick. Water-saturated pebblestone is found in deeper layers and the soils are subject to subsidence.

62. Shallow aquifer groundwater is located at 3 -5 m depths in a few areas, but more often at depths of 10-20 m. Ground water is recharged by infiltration from irrigation waters and precipitation. Groundwater has high TDS levels and is saline making it unfit for use on concrete production or for safe consumption<sup>1</sup>.

### 5.4 Water resources

#### *Surface water*

63. The main sources of surface waters of Jizzak region are the Sanzar and Zaaminsu Rivers. The Sanzar River is the largest in Jizzak province and flows from Chumkurtau Mountains at 3300 meters for 123 km at which point it has been diverted into the Kly Canal. It has a catchment area of 2,600 km<sup>2</sup>, and is fed by snow melt and has an average annual water flow of 6.9 m<sup>3</sup>/sec.

64. In Jizzak City the river turns northward and as it passes Kly Village it is diverted into the Kly Canal, much of it being used for irrigation. The Kly is also a collector for wastewater and ends up discharging its flow into the Aydar Lake.

65. The Zaaminsu River is the second largest river of the province, but since it is totally outside the potential influence zone of the project, is not addressed further in this ESMP.

66. Much of Jizzak Region was a semi desert and salt pan area, converted to agricultural production of mainly cotton and wheat, via a massive irrigation system developed during the Soviet era.

67. The highly saline Aydar Lake exists due to collector-drainage waters as well as discharge of excess water of Chardara water reservoir. Despite being a manufactured, the lakes average 28 km wide and when there is water, 160 km long and averaging 12.5 m deep. Between 2006 and 2011, the mineralization (alkalinity) of Aydar Lake doubled, increasing from 1 to 2 g/l.

#### *Ground Water*

68. Water for Jizzak region is supplied from ground water sources located along the Sanzar and Zaamin Rivers as well as some springs. In 2011 total volume extracted was 57.7 million m<sup>3</sup>. Ground water aquifers are recharged via precipitation infiltration, mountain runoff and irrigation

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<sup>1</sup> Jizzak has an above average incidence of both kidney stones and gallstones, both associated with highly mineralized drinking water (RoU Health Ministry statistics, 2014)

channel infiltration. This latter source is of concern since heavily polluted waters are often discharged into these irrigation/drainage canals, as for example the Ulgursay canal which has been discharging untreated sewage into the collectors since 2006. The main sources of groundwater pollution in Jizzak are public utilities, agricultural production practices, industrial plants, and poorly functioning wastewater treatment plants (National Report on Environment and Use of Natural Resources in Uzbekistan. Tashkent, Chinor ENK, 2013).

69. Due to the diversion of the Sanzar River's water for irrigation, the downstream wells now suffer; water levels are decreasing, and hardness of the water increases markedly affecting the taste and potability. In some of ground water wells (Promzona, Kurgan, Saribazar, Uch-Tepa, Sanzarselskiy and Devon areas) mineralization (total alkalinity) level from 1150 to 2050 mg/L, and hardness level of 8.0 to -18.6 mg-equivalent/L have been recorded. These levels render water unsafe to drink, and if consumed lead to kidney and gallstones.

## 5.5 Biological resources

70. **Flora and Fauna** - Uzbekistan pays great attention to biodiversity and its maintenance. Among the first conventions to which the Republic joined is the Convention on Biological Diversity (1995). Convention "On Conservation of Migratory Species of Wild Animals" (1998), the Convention on Wetlands of International Importance especially as Waterfowl Habitats (2001). In Jizzak province there is Zaamin Mountain-Juniper State Nature Reserve and Zaamin National Natural Park which are located in the northern part of Turkestan mountain range. These protected areas are 1760-3500 meters above sea are the habitat for the white-clawed bear, bearded vulture, black stork, but are located 55 km from the subproject area. There is no special biodiversity protection zone within the lands allocated for new construction or along the water distribution network.

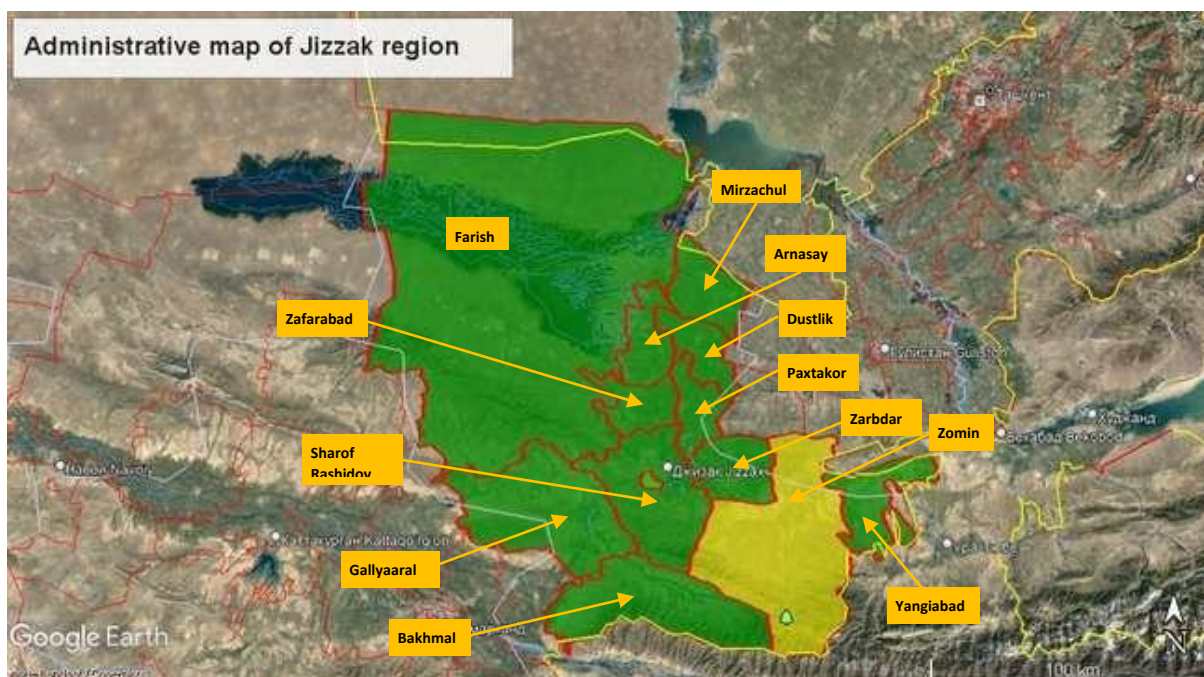
### **Critical Habitat: Environmentally Sensitive Areas, Rare and Endangered Flora and Fauna and Protected Areas**

71. Critical Habitat: Environmentally Sensitive Areas, Rare and Endangered Flora and Fauna and Protected Areas - The project area does not contain any of these features. For many kilometres around the well and watertowers and along the water distribution network, the area is rural landscape with buildings, roads and road shoulders.

## 5.6 Socio-economic conditions

72. Jizzak province was founded on December 29, 1973. The administrative center of the province is Jizzak city. The province is divided into 12 administrative districts: namely Arnasay, Bakhmal, Dustlik, Farish, Gallaorol, Jizzakh, Mirzachel, Pakhtakor, Yangiabad, Zomin, Zafarobod, Zarbdor. The administrative division of Jizzak province is presented below in Figure 4.

73. The population of Zomin district is about 166,900 people (as of 1st January 2021). Estimated population growth based on historical trends is 2.2% per year (Source: State Committee on Statistics).



**Figure 4. Administrative map of Jizzak region**

74. The main socio-economic indicators of Jizzak region are provided in Table 2.

**Table 2: Socio-economic indicators of Jizzak region**

Name		Indicators
Territory, km <sup>2</sup>		21,210
<b>Population</b>		
Population density, per/km <sup>2</sup>		65.2
Total number of people		1,382,100
Women, per		686,500
Men, per		695,600
Urban population, per		654,000
Rural population, per		741,500
<b>Education Institutions</b>		
Primary schools		544
Secondary professional (colleges)		76
Academic lyceums		3
Higher education institutions		2
<b>Medical Institutions</b>		
Hospitals		60
State clinics		180
<b>Infrastructure, km</b>		
Transport	Car roads	2540
	Railways	274.1
	Airport	
Social (was commissioned)	Gas pipelines, km	42.6
	Water supply networks, km	317.9

75. The main sectors of agriculture in the province are cotton growing, grain growing, vegetable growing, horticulture and viticulture, and meat and dairy farming. The main industries

are electric power industry, machine building, metalworking, building materials, and light and food industry.

### **5.6.1 Agricultural and Mineral Development**

76. The land fund of the district as a whole is 286,500 hectares. Of these, 197,300 hectares are used for the cultivation of agricultural products.

77. The following branches of agriculture are mainly developed in the Zomin region: cattle breeding, agriculture (cotton growing, vegetable growing, melon growing, horticulture, viticulture).

78. There are several shirkat (cooperative) farms specializing in animal husbandry, poultry farming, beekeeping, grain growing, cotton growing and vegetable growing.

79. The total number of farms exceeds 600. Annually, an average of 25,000 tons of grain and 16,700 tons of cotton are grown in the district.

80. The project area is mostly in an rural setting and as such there is no appreciable agricultural or mineral development affected by the project.

### **5.6.2 Transportation**

81. A railway branch on the Tashkent - Samarkand line, as well as highways along the Zomin - Jizzak, Zomin - Gulistan, Samarkand - Tashkent routes pass through the territory of the Zomin region. Bus service in many directions is supported.

### **5.6.3 Standard of Living and Community Health**

82. Zomin is a middle to low-income community, based on RoU data, Poverty in the subproject area is due to factors such as a lack of employment opportunities and inadequate provision of water supply and sanitation services. Positive impacts from the Pshagar subproject are likely to include improvement in the quality of life, time-saving and reduced workload particularly for women, improved household and personal hygiene, and improved health status of adults and children particularly through a reduction in the incidence of infectious diseases.

83. Public health is the most important factor in the socio-economic development of the state and society. It is generally accepted that human health is determined by three main factors: genetics, quality of living and environmental factors. Therefore, the health indicators, the epidemiological situation, changing patterns of disease are directly dependent on condition of the environment. The national situation is improving (Table 3) while conditions in Jizzak are not as good (Table 4).

84. Dysentery incidence in three provinces of the country varies between 64 and 228 people per 100 000 people according to the Ministry of Health of Uzbekistan (Table 3).

**Table 3. Number of acute dysentery cases per 100000 people**

Regions	2006	2007	2008	2009
Jizzak region	124.8	79.0	136.3	79.0
Samarknd region	100.9	64.0	100.4	64.0
Syrdarya region	220.0	182.4	227.6	182.4
<b>Total the country</b>	<b>133.9</b>	<b>120.8</b>	<b>122.2</b>	<b>80.7</b>

Source: Statistics Yearbook, State Statistics Committee of Uzbekistan, Tashkent 2013

**Table 4. Water-Quality related disease incidence in Jizzak city (No. / 100,000 people)**

Disease	2009	2010	2011	2012	2013
Gallstone	270	284	264	283	300
Urolithiasis (Kidney Stones)	119	116	128	134	141
Viral hepatitis	128	120	123	152	468
Acute intestinal infections	209	199	200	223	453

Source: Data of State Epidemiological Surveillance of Jizzak province and Jizzak city health department.

85. Data for the period 2009-2013 on the incidence of four other water-borne diseases were obtained from the Jizzak Health Department and suggest a steady rise in incidences (Table 4), underscoring the urgency of better water treatment. The rise in gallstones and urolithiasis is more associated with highly mineralized water.

86. Goskomecology reported that in 2013 in Jizzak Province 12% of potable water tests (likely an underestimate) did not meet nation standards due to bacterial contamination (National Report on Environment and Use of Natural Resources in Uzbekistan, State Nature Protection Committee of Uzbekistan, Tashkent: Chinor ENK, 2013).

#### 5.6.4 Human Settlement in the Project Area

87. According to the results of the socio-economic study of the Sub-project, the project will not entail the acquisition of private land or any physical or economic movement of people, gardens and structures. The construction will be carried out on the territory transferred in 2021 by the Decree of the hokim for the construction of a water supply systems (Annex 5). According to the letter from the Hokim Zomin district, the transferred land was in the reserve of the hokim (see Annex 6).

#### 5.6.5 Archaeological and Historical Features and Sites

88. Based on discussions with the Zomin Suv Ta'minot and the Administration's office there are no archaeological sites, or historical or culturally important features or sites within 200 m radius (centred over the alignment) of any of the water distribution network. The RCA Pshagar does have important site, Zomin National Park is located more than 30 km in the east site of the Zomin district, from the project affected areas.

### **5.6.6 Access roads**

89. The project does not provide the construction of new access roads. The existing roads are being used as access roads will be used the existing road. Upon the completion of construction works the roads and other local infrastructure will be restored to at least their pre-construction condition.

### **5.6.7 Land Acquisition**

90. For the construction of 7.1 km water distribution networks no land acquisition is required. The networks will be laid within the borders of the existing site, along the grounded and asphalted roads. Temporary impacts on private municipal infrastructure may be expected, as described above.

## **6 PROJECT ALTERNATIVES**

91. This ESMP study sought to consider possible alternatives to the proposed project. Two alternatives were considered. They included the “Zero option” and the Alternative Water Treatment.

### **6.1 "Zero option"**

92. Refusal from the planned activities for the implementation of the Working Project “Construction of Water Supply in Pshagar Rural Citizens' Assemblies of Zomin district of Jizzak region” while maintaining the existing state of water supply for RCA Pshagar will entail a shortage in household drinking water. Thus, the overall environmental situation in the region will deteriorate and the socio-economic damage will increase.

93. Therefore, as a result of a comprehensive consideration of the issue of water supply for this RCA, a choice was made of a technological solution for the construction of a water supply system and is considered optimal for solving the task.

94. It is planned to reduce water losses to a minimum level through the use of the latest equipment.

95. The implementation of the design solutions outlined in this Working Project will allow the uninterrupted supply of potable water and in the required amount to the population of the RCA Pshagar, improve the sanitary and ecological situation in the project region.

### **6.2 Project Alternative**

96. To disinfect water after wells, a house is being built. The DUV - 1A500-NMST bactericidal installation is installed inside the task.

97. Ultraviolet radiation has a high efficiency - 99.9% against a wide range of microorganisms: bacteria, viruses, spores, and parasitic protozoa, including their chlorine-resistant forms. UV

radiation destroys pathogens of infectious diseases such as typhoid, cholera, dysentery, salmonellosis, typhoid fever, viral hepatitis, etc.

98. The UV water disinfection method is safe. Unlike oxidizing technologies (chlorination, ozonation), after exposure to ultraviolet radiation, harmful organic compounds are not formed in water, even if the required dose is repeatedly exceeded. The absence of the risk of overdose simplifies the operation of the equipment. The use of UV disinfection can reduce the amount of chlorine used by up to 5 times and minimize the negative impact of by-products of reagent methods on human health.

99. Ultraviolet acts only on microorganisms practically instantly (3-10 seconds) and does not change the chemical composition and physical properties of water.

100. In DUV-N UV systems, the UV source is an amalgam lamp. The amalgam lamp does not contain liquid mercury, which guarantees its safe use and easy lamp disposal.

## **7 ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

101. Anticipated the project's environmental impacts were reviewed at the three stages – pre-construction, construction and operation stages.

102. This subproject will have a large positive impact on RCA Pshagar, bringing water supply services to many thousands of families. Some temporary impacts associated with construction works will occur. To deal with those impacts, the most important mitigation measures are proposed, and described in the Environmental and Social Management Plan (ESMP) table 13.

### **7.1 Pre-construction stage**

#### **Impact**

103. During pre-construction stage the following aspects may impact on effectiveness of implementation of environmental safeguards during whole project cycle and may lead to noncompliance with requirements: (i) design of water storage facilities will not ensure efficient water quality, (ii) non-efficient sanitarian zone for wells and water towers may lead to deterioration of water quality, (iii) non-inclusion of environmental requirements into the bidding and contract, (iv) no compliance on receiving all required permissions, (v) purchase of goods, techniques and machinery which is not comply with IFC Exception List (Project Negative/ Exclusion List) set forth at Appendix 7 of the Project ESMF Document.

#### **Design of water treatment facilities**

104. Selection of inefficient water treatment technology may lead to production of water with quality which does not meet national standards for drinking water (GOST 950-2011. Hygienic requirements and quality control). For the current project, ground water from all 2 wells and 3 water towers will be used as a water source for drinking water supply for RCA Pshagar. Water disinfection by UV disinfection method is planned (DUV - 1A500-NMST bactericidal installation)

## Rural Infrastructure Development Project

and laboratory analysis will be conducted to ensure water quality with biological indicators (GOST 950-2011).

105. Locations of all new WDFs have been selected in accordance with national requirements indicated in regulation ShNK 2.04.02-19 “Water Supply. External network and facilities”. For almost all WDFs and ground water intake the condition for first level of sanitarian zone are met.

106. Some changes in WDFs location could be done at the stage of the project details design. It may lead to generating new impacts which will require updating the current ESMP.

107. The following activities are proposing to mitigate impacts identified at the preconstruction stage.

### **Mitigation measures**

- During detail design stage layout WDFs, route of main trunk and water distribution networks will be updated with consideration of minimizing impact on environment and population during construction and operation phases;
- Ensure that first sanitarian zone (within 15 meters radius from the well) for ground water intakes is in compliance with national standards ShNK 2.04.02-19 “Water Supply. External network and facilities” (2019) and the territory is fenced ;
- IA with assisting Project Management Consultant’s (PMC) environmental specialist will ensure inclusion of environmental provision along with ESMP in the bidding documents and in contracts for Contractors;
- Bids evaluation needs to be done with consideration of: capacity of bidders to meet ESMPs requirements, proposing adequate budget efficient for implementation ESMP, existence of good practice in environmental performance within other similar projects;
- Within 30 days after contract award and prior to commencing any physical works, Site-specific Environmental Management Plan (SSEMPs) will be developed by the Contractors under the guidance of the PMC, and be endorsed by PMC before submission to Project Implementation Unit (PIU) for approval;
- In addition to SSEMPs, Topic Specific SEMP need to be prepared by Contractors, endorsed by PMC and approved by PCU for the following activities: Traffic Management Plan for construction of distribution network within settlements, Waste management Plan for sites with demolishing works, Hazardous Wastes Management Plans as described in the next sub-sections, Construction Camps Management Plan and Occupational Health and Safety Plan (OHS Plan);
- Goods procured for project implementation will be done in compliance with IFC Exception List (Project Negative/ Exclusion List) set forth at Appendix 7 of the Project ESMF Document;
- Environmental specifications have to be included in bidding packages for purchase machinery within the project. Particularly, toxic level of machinery must meet “Euro 3” environmental requirements as defined by national regulations ;
- If any changes in the project design will take place, the ESMP has to be updated accordingly.

## 7.2 Construction stage

### 7.2.1 Physical resources

#### Impact on air quality

108. During construction stage pollutants emissions will be caused by earth works, construction/demolishing activities and exhaust gases from vehicles. It is expected that dust pollution will occur more frequently. Especially, risk of dust pollution will increase during the windy weather and movements of trucks with high speed inside settlements.

109. At the same time equipment and vehicle with improper technical characteristics or in poor conditions also may lead to pollution by exhausted gases. Improper waste management, particularly burning of construction and domestic wastes may lead to air pollution.

110. All WDFs (Monguzar WT&Well, Soychi Well, Soychi WT, and Adrobod WT) are located close to settlements (5-40 meters). For this settlements dust level monitoring needs to be conducted. In case of exceeding standards for dust level for this area ( $0.15 \text{ mg/m}^3$ ) additional mitigation measures for dust control need to be undertaken – more often watering or installation of dust screen.

#### Mitigation measures:

111. During construction period regular mitigation measures shall be used in the most of the cases:

- Apply watering of construction sites and roads inside settlements during dry season;
- Cover transported bulk materials;
- Control speed limitation for vehicles during movement inside of settlements - no more than 40 km/h;
- All vehicles and techniques must comply with technical requirements and have to pass regular inspection as indicated into the national standards<sup>2</sup>;
- Prohibit open burning of solid wastes generated particularly from labor camps and construction activities;
- Clean wheels and under carriage of haul trucks prior to leaving construction site;
- Restrict demolition activities during period of the high winds or under more stable conditions when winds could nevertheless direct dust towards adjacent communities;
- Conduct monitoring of dust level in front of settlements located close to constructed WDFs. In case of exceeding standards for dust level for this area ( $0.15 \text{ mg/m}^3$ )<sup>3</sup> additional mitigation measures for dust control need to be undertaken – more often watering or installation of dust screen;

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<sup>2</sup> “O’z DSt 1057:2004 Vehicles. Safety requirements for technical conditions” and “O’z DSt 1058:2004 Vehicles. Technical inspection. Method of control”.

<sup>3</sup> SanR&N RUz No.0179-04 Hygienic norms. List of Maximum Allowable Concentrations (MACs) of pollutants in ambient air of communities in the Republic of Uzbekistan including Annex 1

- Pipe laying works in street with width less than 2 meters, needs to be conducted manually.

## **Noise and vibration**

### **Noise**

112. To assess an anticipated noise level during these type of works calculations were done based on existing information about operation of various equipment. During construction works on WDFs and water pipelines temporary noise emissions may be caused from the following equipment:

- Drilling machine
- Construction equipment
- Earth moving activity
- Generators
- Vehicles used for material transport

113. Level of noise generated by various equipment was used based on existing standards. It is expecting that during the following equipment will be used for construction of wells, water towers, and pipe laying of distribution network.

**Table 5. Noise Level Form Various Techniques (at the distance 50 feet<sup>4</sup>)**

Noise source	Equivalent noise level, dB
Excavator	81
Dozer (Bulldozer)	82
Compactor (ground)	83

Source: WSDOT measured data in FHWA's Roadway Construction Noise Mode Database (2005).

114. As a rule, noise caused by moving equipment is reduced at some distance. Such reduction has logarithmic properties. In case of noise caused by construction activities, noise spread pattern from the noise point is used, that can be determined as: Noise level1 –

115. Noise level2 = 20 log r2/r1.

**Table 6. Noise Levels at the Various Distances**

Distance	Equivalent noise level (maximum), dB		
	Excavator (81)	Dozer (82)	Compactor (83)
5	78	79	80
10	66	67	68
75	63.7	64.7	65.7
100	60	61	62
300	48.6	50	50.6

116. Taken in account that due to fencing (at least 2 meters) which will be constructed first on the project sites, noise levels will decrease by 6 dB. In addition, noise levels will reduce by 1.5 dB due to non-asphalted soil absorption.

117. Based on results of noise propagation presented in Table 6, and taking into account reductions in noise level listed above, noise level at the distance 100 m from the fence site will

<sup>4</sup> One feet is equivalent to 0.348 meters, 50 feet is meters 15m

comply with standards - 55 dB<sup>5</sup> for daytime in the area adjusted to the living houses. Baseline assessment showed that ambient noise level for the area adjusted to construction exceeds standards on 10 dB and it is equivalent to 65 dB. In accordance with IFC requirements when “noise impacts should not exceed the levels of presented in Table 1.7.1, or results in a maximum increase in background levels of 3 dB at the nearest receptor location off-site”<sup>6</sup>. Therefore, noise level generated by construction equipment should not exceed 68 dB in front of houses faced to construction site.

118. Project sites are located in the RCA Pshagar settlement. Therefore, for this site anticipated noise impact was assessed.

119. Thus, for the territory of “Monguzar WT&Well”, residential houses from southwest are located at a distance of 10 and 24 meters (Figure 5). According to ShNK-2.04.02-19 “Water supply. Outdoor networks and facilities” the boundary of the first zone of the zone of waterworks should coincide with the fence of the site of the facilities and be provided at a distance from the walls of other structures and the shafts of water towers - at least 15 m (clause 10.17). Since the water tower is being designed in the middle of the territory, the sanitary and protective boundaries of the first belt of the zone are observed and resettlement of the nearby residential buildings is not required. On the territory of the second zone of the zone of the surface source of water supply, it is necessary to regulate the allocation of territories for settlements (clause 10.25). However, they could therefore be considered as sensitive receptors due to the location of the impact zone (closer than 100 meters). The second and further rows of houses should not be impacted by noise from construction activities due to reduction of noise of walls and fences of first row houses.



**Figure 5. The territory of “Monguzar WT&Well” (RCA Pshagar)**

<sup>5</sup> SanN&R 0267-09, Acceptable noise levels for habitable areas Uzbekistan 0267-09 and IFC, EHS Guidelines, 2011

<sup>6</sup> IFC, EHS General Guideline, 2007, chapter 1.7.

120. There are several houses located in the impact zone (100 meters) of the territory of “Soychi WT” in RCA Pshagar. They are located at distances of 30, 45, and 63 meters (Figure 6). Therefore, for this site, additional mitigation measures will also have to be applied.



**Figure 6. The territory of “Soychi WT” (RCA Pshagar)**

121. In the territory "Soychi Well", residential houses are located at a distance of 15 and 42 meters. The school building is located 15 meters to the north, a private stall is 5 meters to the southwest of the border of the project area (Figure 7). It means that noise levels in these locations will exceed the norms of 55 dB. Therefore, implementation of mitigation measures are needed for this site as well.



**Figure 7. The territory of “Soychi Well” (RCA Pshagar)**

122. There are 3 houses located in the impact zone (100 meters) of the territory of “Adrobod” in RCA Pshagar. They are located at distances of 15, 81 and 85 meters. Therefore, for this site, additional mitigation measures will also have to be applied. See Figure 8.



**Figure 8. The territory of “Adrobod” (RCA Pshagar)**

123. During pipe laying works some noise impact will occur due to work of technics. Even impact will be short term, it is required to implement mitigation measures.

**Mitigation measures:**

124. The following measures need to be implemented to avoid noise and vibration impacts on project sites located within RCA Pshagar:

- Install acoustic barrier next to the WDFs, “Soychi Well”;
- For the rest of WDFs acoustic screens have to be used if construction activities will be implemented closer than 100 m;
- If noise level in front of houses near to WDFs “Monguzar WT&Well”, “Soychi WT” and “Adrobod” increases 68 dB during the day time, install acoustic screen;
- During construction period establish limits on speed for vehicles inside of settlements (40 km/h);
- In case of receiving any complaints from population, noise measurements need to be conducted and in case of exceeding established standards, additional mitigation actions for decreasing noise level need to be undertaken (establishing temporary sound absorbing barriers and others);
- Schedule construction so as to minimize the multiple use of the most noisier equipment near sensitive receptors (houses, schools);
- Use of Personal Protective Equipment (PPE) by workers involving in demolishing and construction works in conditions of increased noise level (more than 80dB) is mandatory;

- Conduct weekly noise measurements at the all WDFs. Make sure that noise level not exceed 55 dB during the day time;
- During pipe lying works in the site where digging of tranche will be implemented closer than 2 meters to the wall use compact less noisier pipe lying techniques;
- Inform population about anticipated works.

## **Vibration**

### **Vibration impact**

125. Vibration impact during construction stage could be caused by the same machinery. The level of vibration and its propagation within a distance was calculated in accordance with methodology indicated in Transportation and Construction Vibration Guidance Manual (2013).

126. The Manual with reference to Transit Noise and Vibration Impact Assessment (Federal Transit Administration 2006), provides information on vibration level from different construction equipment (Table 7). The table does not provide data on mobile and assemblies cranes since vibration level is not significant.

**Table 7. Vibration Source Amplitudes for Construction Equipment**

<b>Equipment</b>	<b>Reference in PPV at 25 feet (in/sec)</b>
Excavator (Calm shovel drop)	0.202
Lange Bulldozer	0.089
Small Bulldozer	0.003
Loaded trucks	0.076

Source: Federal Transit Administration 1995 (except Hanson 2001 for vibratory rollers).

127. Using these source levels, vibration from this equipment can be estimated by the following formula:

$$PPV_{eqp} = PPV_{Ref} \left( \frac{25}{D} \right)^n$$

Where:

$PPV_{Ref}$  = reference PPV at 25 ft.

D = distance from equipment to the receiver in ft;

N = 1.4 (the value related to the attenuation rate through ground).

128. Values of vibration level calculated in accordance with this formula are presented in Table 8.

**Table 8. Calculation of Vibration from Equipment**

<b>Distance</b>	<b>Vibration from equipment</b>							
	<b>Lange Bulldozer</b>		<b>Small Bulldozer</b>		<b>Loaded trucks</b>		<b>Excavator</b>	
	<b>in PPV (in/sec)</b>	<b>in dB</b>	<b>in PPV (in/sec)</b>	<b>in dB</b>	<b>in PPV (in/sec)</b>	<b>in dB</b>	<b>in PPV (in/sec)</b>	<b>in dB</b>
20	0.12	67	0.004	37	0.1	66	0.25	

Distance	Vibration from equipment							
	Large Bulldozer		Small Bulldozer		Loaded trucks		Excavator	
	in PPV (in/sec)	in dB	in PPV (in/sec)	in dB	in PPV (in/sec)	in dB	in PPV (in/sec)	in dB
30	0.07	63	0.002	34	0.05	62	0.16	
50	0.03	58	0.001	29	0.028	57	0.08	

Source: PPTA’s Consultants, 2018.

129. National standards for vibration level in residential houses are provided in Sanitarian Norms and Rules (SNR) № 0146-04 “Design of the living houses in climatic conditions of Uzbekistan”. For living houses the standards is 67 dB for night time and 72 dB for day time with frequency in 37 and 61 Hz and for night time is 67 dB. (Table 9)

**Table 9. National Standards for Vibration**

Period	Permanent vibration, dB
Day time	72
Night time	67

130. The standards are provided in “Transportation and Construction Vibration Guidance Manual” (2013). The Manual provides two types of limits for vibration level – for “frequent events” and “infrequent events”. The Manual defines that “Frequent events” (continuous) is defined as more than 70 events per day and “Infrequent events” (single event) is defined as fewer than 70. As showed calculation of maximum amount of trucks which will move to and from site will be more than 80. Therefore, more stringent (lower threshold) is applied for the current assessment for vibration impact. For example, a threshold for residential buildings with plastered walls/... is 0.2 in/s for continuous vibration and for single event condition is 0.5 in/s.

131. The Table 10 presents maximum continuous vibration level for preventing damages for different type of buildings. This data could be used as thresholds for both phases – construction and operation for structural integrity of buildings/houses.

**Table 10. Maximum Continuous Vibration Levels for Preventing Damage (mm/s)**

Description of building type	AASHTO (1990)			SAS (1992)		
	mm/s	in/s	dB*	mm/s	in/s	dB*
Historic sites or other critical locations	2.5	0.09	94	2.5	0.09	94
Residential buildings with plastered walls / Building with foundation walls and floors in concrete, wooden ceilings and walls in masonry	5.1-7.6	0.09	100-104	5.1	0.2	100
Residential buildings in good repair/ Building with foundation walls and floors in concrete, walls in concrete or masonry	10.2 – 12.7	0.40-0.49	106 - 108	7.6	0.29	100
Engineered structures without plaster / Buildings in steel or reinforced concrete	25.4 – 38.1	0.99 – 1.4	114-118	12.7	0.49	108

AASHTO = American Association of State Highway and Transportation Officials, SAS = Swiss Association of Standardization.

Source: California Department of Transportation (2013), US Transportation Research Board (2012).

\* Converting into dB was done based on formula provided in para 57.

132. To convert vibration level presented in dB into vibration velocity presented in mm/s and vice versa the following formulas were used:<sup>7</sup>

$$V_{dB} = 20 * Lg10(V) + 86,$$

$$V = 10^{(V_{dB}-86)/20}$$

Where:  $V_{dB}$  - vibration level in dB, and V – vibration velocity in mm/s

133. As showed results of calculation of vibration level (Table 12), vibration from construction activities on this stage will not impact on people living on surrounded area and structures since it is below standard in 72 dB for day time.

134. Anticipated vibration levels at the distances 65 meter is below standard. It will not also impact on residential building as well, since the highest vibration level will not exceed 0.2 in/s or 100 dB (Table 21).

**Main Construction activities and construction of access road**

135. Data on vibration from equipment generating vibration during these stages of construction activities are presented in Table 11. For completion of construction of access road (asphalting) vibration roller will be used as well.

**Table 11: Noise Level Form Various Techniques (at the distance 50 feet<sup>8</sup>)<sup>9</sup>**

Noise source	Equivalent noise level, dB
Excavator	0.202
Dozer (Bulldozer) large	0.089
Compactor (ground) (vibration roller)	0.21
Loaded Trucks	0.076
Vibrator for concrete compaction	0.21
Pulling machinery	0.0734
Backhoe	80

Source: FTA, 2006

136. Calculation of vibration level at the different distance are presented in table 12.

**Table 12: Calculation of Vibration from Equipment**

Distance	Vibration from equipment									
	Lange Bulldozer		Pilling machenary		Excavator		Vibration for concrete compaction		Compactor (vibration roller)	
	in/s	in dB	in/s	in dB	in/s	in dB	in/s	in dB	in/s	in dB
20	0.12	68	1.00	86	0.28	75	0.29	75		
30	0.07	63	0.57	81	0.16	70	0.16	70		
50	0.03	56	0.30	76	0.08	64	0.08	64		
	0.03	56	0.21	72	0.06	62	0.06	62+9+		

137. Therefore, vibration level, generating during construction works will not exceed standards for people (Table 12 – 72 dB) at the distance 65 and 70 m. It will also not exceed standard for

<sup>7</sup> <http://vibrocenter.ru/vibroacc.htm>

<sup>8</sup> One feet is equivalent to 0.348 meters, 25 feet is 8.7 meters.

<sup>9</sup> Part Two – Construction noise impact assessment, Table 7-4.

buildings and structures (0.2 in/s). For integrity of building located in the distance 30-40 meters from construction site, usage of piling machinery on the distance closer than 60 meters may have some risk. Even calculation of vibration level showed that the vibration level will not exceed the level which may impact on people's health and houses integrity, it is recommended to conduct a visual observation of the farmer's temporary house before commissioning construction works and on monthly base during works of piling machinery. In case of any cracks or damages mitigation measures need to be applied:<sup>10</sup> pre-drilling, using alternatives non-impact drivers, using cast-in-place or auger cast piles and etc.

### **Mitigation measures:**

138. The following measures need to be implemented to avoid noise and vibration impacts on project sites located within settlements:

- Schedule land leveling so as to minimize the multiple use of the noisiest equipment on the site;
- Do not use several machineries at the same time within the distance closer than 75 meters to the north border of the construction site "Soychi Well";
- Use of Personal Protective Equipment (PPE) by workers involving during construction stage in the sites where noise level will exceed 80 dB as per national regulation;
- Inform population about anticipated works;
- Schedule construction works between 8 am and 7 pm. In case of extension working hours, inform community (RCA Pshagar) in advance;
- Conduct visual observation of temporary faced to construction site on integrity
- Nevertheless, noise level monitoring needs to be implemented on the regular in accordance with the methodology indicated into the Environmental Monitoring Plan (Chapter 8, Table 14). In case of exceeding noise level during construction phase on 3 dB in comparison with baseline situation, additional mitigation measures, such as construction acoustic screen could be applied;
- Conduct a visual observation of the houses and administrative buildings near to WDF "Soychi Well" before commissioning construction works and on monthly base during works of piling machinery. In case of any cracks or damages mitigation measures need to be applied: pre-drilling, using alternatives non-impact drivers, using cast-in-place or auger cast piles and etc.

139. Therefore, impacts on air quality, noise and vibration will be temporary and it could be mitigated by implementation of recommended measures.

### **Impact on water resources**

140. The surface water may be polluted due to improper placement of excavated soil, poor management of construction camps, and improper storage of construction materials, leakage of

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<sup>10</sup> List of mitigation measures indicated in "Transportation and Construction Vibration Guidance Manual", 2013, Chapter 8.

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fuel and lubricates from construction machinery, washing of vehicles and techniques without proper treatment.

141. Construction of new wells as well as construction of water towers will not be conducted next to the water bodies.

142. Implementation of the mitigation measures and continuously monitoring of water quality in the points indicated in Environmental Monitoring Table (Chapter 8) is necessary to avoid deterioration of water quality.

### **Mitigation measures:**

143. The following mitigation measures shall be implemented to minimize impact on water resources:

- Construction and labor camps, including storage places for lubricant, fuel and other oils will be located 100 m away from water bodies;
- Conduction of refueling, oil replacement or repairing works will be banded at the area within 50 m from water streams;
- Sanitary waters and solid wastes will not be released directly into water streams;
- Topsoil stripped material shall not be stored where natural drainage will be disrupted;
- Water samples will be taken and compared with the baseline monitoring results obtained in the preconstruction stage. Location of monitoring points, frequency and monitoring substances are presented in Environmental Monitoring Plan (Chapter 8).

144. Groundwater table level in the Project zone is located lower 18-20 meters. Therefore, potential impact arises from maintenance of contractors' camps, transport, maintenance of vehicles and handling and storage of lubricants and fuel. The required provisions for construction camps and monitoring of ground water quality are described in the subsections describing impacts on soil quality and waste management.

145. Although location of WDF is selected at the highest elevation in order to provide good pressure of pumping water, there is some possibility that ground water may impact during construction of WDFs. Therefore, it is recommended that all construction works related to digging on the depth more than 3 meters (pump station and administrative buildings basement) need to be conducted during non-irrigation season. The irrigation season in that region is May-August. If this period could not be avoided, usage of standard technology for construction in areas with high water logging needs to be applied – pumping water into the nearest drainage canal.

146. Direct or indirect (through soil) pollution of ground water may deteriorate of water quality in the hand pumps, which population use for drinking purposes. Therefore, monitoring of water quality in the hand pumps houses located close to the rehabilitating or constructing new WDFs needs to be undertaken by Contractor on the monthly base. In case of exceeding standards, ground water pollution source(s) need to be identified and repaired.

### **Impact on soil**

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147. The main anticipated impacts on soil during construction stage will be: disturbance or loss of top soil, its compaction and pollution. For pipe lying works, earth excavation, pipe laying and backfill of material including compaction will be implemented. Excavated soil will be temporary stored alongside the trench and refilled after pipe lying. Gravel will be used as a bed for the pipes and excavated soil will be placed back to fill tranche and be compacted. Certain amount soil will surplus due to pipes and gravel in trench.

148. Surplus excavated soil will be generated during construction of WDFs particularly for construction of water towers and pump stations. Even surplus materials will be used as embankment fill as far as possible certain amount of earth will remain.

149. The movement of equipment and the temporary storage of materials on the ground during the construction may lead to compaction of the soil. This compaction will take place in the area affected by the construction works, in its vicinity, in the access areas, pipelines, etc.

150. Gravel and sand will be required for pipe lying and rehabilitation of damaged roads. Unauthorized excavation of such construction materials and improper restoration works on closing used carriers will negatively impact on soil.

### **Mitigation measures:**

151. To minimize this impact on soil quality the following measures shall be implemented:

- The top soil of about 30 cm depth shall be removed and stored separately during excavation work, and after the construction of the main trunk pipes the same soil shall be replaced on the top, in unpaved areas;
- The excess top soil and earth reminded after construction new WDFs will be used at other project sites or disposed at the places prior approved by local government authorities and The State Committee for Ecology and Environmental protection (Goskomecology);
- To minimize soil compaction, movement of all type techniques will be allowed only through identified assess roads;
- Contractors will be required to use only authorized carriers with getting all necessary permissions per respective national legislation.

152. Pollution of soil during construction phase maybe caused by improper handling of fuel and oil during refueling and poor waste management which is reviewed in the next chapters.

### **Waste management**

#### ***Hazardous wastes***

153. During the construction phase hazardous wastes (used oil and batteries, fuel and bitumen residuals) will be generated from operation and maintenance of machinery. In case of improper handling and dispose of such materials it will lead to pollution of environment and such wastes are hazardous to human health.

### **Mitigation measures:**

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- Used oil shall be collected into containers placed at the concreted sites and disposed to national oil companies designated for accepting and treatment of used oils<sup>11</sup>;
- Refueling vehicles and oil replacement have to be conducted in the special designated and properly equipped places. Such places have to be organized in the way avoiding releasing or leakage of oil on the ground or water courses. Emergency facilities have to be at the place for elimination of accident of oil spills;
- Used batteries have to be collected separately and transferred to the local branches “Cvetmet” for further disposal.

### *Non-hazardous wastes*

#### Municipal wastes

154. Municipal solid wastes and waste waters will be generated at the construction and camp sites. Mainly it will be rubbish, plastic or glass bottles, waste food, organic wastes and etc. Improper wastes management may cause the spread of infectious diseases, emergence of insects and parasites in construction camp sites. In addition, it may lead to pollution of water courses and soil, conflicts with local population.

155. For disposal of municipal wastes, the Contractor will receive permit on waste disposal from State Committee on Ecology and Environment protection (SCEEP) and will conclude agreements with relevant national agencies on their disposal for whole construction period. All wastes have to be disposed only in the areas indicated into the permits.

156. Sewage and “grey” water (water from bathroom and canteens) generated at site offices and work camp should be appropriated managed, so it does not produce odors or pollute water courses. There is no centralized sewage system in construction site. Therefore, Contractor is required to provide his own on-site waste water treatment facilities such as septic tanks. For disposal sewage from septic tanks Contractor will have also to get permit from State Committee on Ecology and Environment protection (SCEEP) and conclude agreement with national agency “Toza Hudud”. Direct discharge of untreated sewage or oily water in surface water courses will be prohibited.

#### Construction wastes

157. Construction wastes generating during the leveling stage will be mainly residuals of plants. There is some probability that stones will be founded during this type of works. All these wastes could be disposed on the municipal landfills indicated by local agency “Toza hudud” which is under State Committee on Ecology and Environmental Protection (SCEEP).

158. During the main works, construction of internal and access roads construction wastes will consist of packing materials, welding rods, broken bricks and etc. Therefore, the following mitigation measures need to be applied for whole construction site period.

#### Mitigation measures:

- Segregate municipal on recyclable and non-recyclable;

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<sup>11</sup> Resolution of Cabinet Ministries of RUz # 258 “On collection, storage and further disposal of used technical oil” dated from 4 September 2012

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- Obtain permit on disposal all types of wastes;
- Sell recyclable wastes to relevant local waste processing organizations (paper, glasses, plastic) and timely dispose of non-recyclable wastes to the landfill, determinate by local hokimiyat;
- Provide hydro isolated septic tank for collecting waste waters at the construction camp sites and bio toilets for workers at the construction sites and timely dispose waste waters to the local waste water treatment plants;
- Prohibit burning of all types of wastes;
- Prohibit discharge of sewage or oily water in surface water courses or soil;
- Create a safe (sheltered with concrete foundation) storage facility for water.

### **Biological resources**

159. It is expected that during the construction works limited impact on biological resources may occur. Project sites are combination of populated area and agricultural lands represented by typical rural and agro-biocoenosis. There are no natural protected areas or sensitive environmental receptors close to project sites. The nearest natural protection zone – Zomin National Park is located more than 30 km to East from RCA Pshagar, which means no impact on the reservation.

160. There are no cutting trees planned in the project area. If during the construction period it is revealed that it is necessary to cut down trees and shrubs, then before cutting trees compensation payment will be done as indicated in the RPF for this project.

161. The project site is located on the rural lands without representatives of wild animals. Nevertheless, burning of the plants' residual during project cleaning stage will be prohibited.

162. To mitigate adverse impact on vegetation and wildlife and to comply with national requirements the following measures should be apply:

### **Mitigation measures:**

- Clear mark the project site in order to avoid unnecessary felling of trees;
- During land leveling don not use chemical and burning for removing vegetation;
- Don not use chemical and burning for removing vegetation.

### **Impacts on land use**

163. Impacts on land use was accessed based on Socio-economic Study materials prepared for this project. The feasibility design attempted to minimize the land acquisition and involuntary resettlement. The impacts are categorized as permanent and temporary. The project components which require permanent land acquisition include four ground water distribution facility ("Monguzar WT&Well", "Soychi Well", "Soychi WT", and "Adrobod WT"). Total land requirement for acquisition is 0.36 hectares (ha) hokimiyat reserved lands. This is an estimation based on the technical input received from the engineering team. However, this is still draft and subject to change.

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164. Temporary impacts occur in terms of loss of crops during the construction of pipe lines especially the transmission mains and distribution mains which pass along the rural roads. The roads will be restored to the previous use post the construction and the users will be allowed to use it.

165. Totally 0.6 hectares of land is likely to be impacted temporarily due to construction of transmission main and supply main pipelines.

### **Socio-economic resources**

166. Only minimal impacts on land use are expected, since sites are typically located on lands not used for any other purpose or in built-up areas. However, the contractor will produce a plan showing the impacts of pipe-laying affecting some utilities and/or trees established within the road allowances, which will be coordinated and in conformance with the land and resettlement framework.

167. Any temporary loss of access to houses and business will as far as possible be mitigated by establishing temporary access routes to affected households and businesses, especially when risk of economical impact to businesses due to lack of access for customers is identified or foreseen.

168. The project activities will have no adverse environmental impacts and the minor impacts that will arise during especially the construction phase, and which will be mitigated by the ESMP requirements, will not affect particular vulnerable groups disproportionately.

### **Mitigation measures:**

- Inform community in advance about planning works;
- For construction works which do not require specific skills, hire local population as much as possible;
- If cutting trees is unavoidable, to compensate losses as indicated in the RPF for this project and in cost for trees.
- conduct explanatory work among workers about the local culture and traditions;
- Any accidental or unanticipated impacts that could not be identified during preparation stage of the project will be fully restored and/or compensated by the Contractor. This provision will be included in the contract for civil works and budgeted for by the contractor.

### **Health and safety issues**

169. Besides impacts on air, water and soil quality, described in previous chapters, certain risks related to community health and safety, for workers in campsites may occur during construction phase.

#### ***For community***

170. Inadequate lighting and fencing of construction sites inside of settlement areas can be dangerous for pedestrians and vehicles especially during the night time. Increasing of traffic due to trucks and vehicles movements to construction sites, temporary closing of roads during construction of access roads may cause inconvenience for local population as well.

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171. Untimely and inefficient disposal of solid waste and improper sanitary conditions generated by the construction workers at construction sites and labor camps may cause pollution of the surrounding environment and affect on the health of local people. There also could be some social problems due to irresponsible behavior of the outside work force such as gambling, alcoholism and disrespect to local people and their culture.

172. Cultural interference workers with local communities may cause HIV and sexually communicable diseases (STD) spreading in case of law awareness about these diseases among workers and community.

173. The following measures need to be undertaken to minimize this impacts:

### **Mitigation measures:**

- Inform population of the RCA Pshagar about planning works in advance;
- Together with traffic police authority of RCA Pshagar Contractor should develop a Traffic Management Plans with clear indication routes of vehicles' movements, placement of special signs, and speeding allowance. The Traffic Management Plan has to be approved by RCA Pshagar and disclosed to local community prior commencement of construction works on respective sites;
- Provide proper lightening of construction site;
- Development of Site Specific Plans for campsites;
- Carry out regular awareness campaigns among work staff, including specific hazards associated with the spread of HIV/AIDS;
- After completion of the construction works reinstate construction and camp sites by bringing them to its primary condition;
- PSC will conduct a post-construction audit during a defect liability period to make sure that construction sites and camps are properly cleaned and restored before hand-over to Executive agency – Ministry of Economy Development and Poverty Reduction.

### ***For workers***

174. Separate Site Specific ESMP (SSESMP) for labor/construction camps will be developed by Contractors, endorsed by PSC and approved by the Environmental Specialist of PIU prior commencement of works. SSESMP for labor/construction camps will describe waste collection and disposal procedure, set up of camp facilities (such as a storage place for construction materials and techniques if any, laundry and toilets, access roads) in the way, which will allow to minimize impacts on environment and disturbance of local population. Labor camps have to provide safe and adequate living conditions for workers, such as dining rooms, toilets, shower rooms emergency medical kits. Other measures for fire-fighting and preventing electric shocks etc. need to be organized in accordance with national standards.

175. The Contractors will require to develop Occupation Safety and Health Plan, which covers among others the following topics: usage of Personal Protection Equipment's (PPE), working procedure in dangerous conditions (works at height, with noise equipment and etc.), training activities and others.

***Impact assessment due to COVID-19***

176. The projects' construction/civil works will involve work force, together with suppliers and supporting functions and services. The work force may comprise workers from national, regional, and local labor markets. They may need to live in on-site accommodation, lodge within communities close to work sites or return to their homes after work. There may be different contractors permanently present on site, carrying out different activities, each with their own dedicated workers. Supply chains may involve international, regional and national suppliers facilitating the regular flow of goods and services to the project (including supplies essential to the project such as fuel, and water). As such there will also be regular flow of parties entering and exiting the site; support services, such as catering, cleaning services, equipment, material and supply deliveries, and specialist sub-contractors, brought in to deliver specific elements of the works.

177. Given the complexity and the concentrated number of workers, the potential for the spread of infectious disease in projects involving construction is serious, as are the implications of such a spread. Projects may experience large numbers of the work force becoming ill, which will strain the project's health facilities, have implications for local emergency and health services and may jeopardize the progress of the construction work and the schedule of the project. Such impacts will be exacerbated where a work force is large and/or the project is in remote or under-serviced areas. In such circumstances, relationships with the community can be strained or difficult and conflict can arise, particularly if people feel they are being exposed to disease by the project or are having to compete for scarce resources. The project must also exercise appropriate precautions against introducing the infection to local communities.

178. The GoU has adopted the special procedure on acting in conditions of pandemic - the Temporary Sanitarian Norms and Rules (SanN&R) # 0372-20 "On organization of performance of state agencies and other organizations, commercial entities in limited measures condition due to pandemic COVID-19». The document was approved by the Agency on Sanitarian Epidemiological Well-Being (3rd edition), May 11, 2020. The SanN&R provides general requirements and specific requirements for different sectors: pharmacy, public transport, markets, construction sites and etc.

179. According to SanN&R, the managers of organizations are personally responsible for compliance with the SanN&R. All works have to be organized in order to ensure:

- preventing the introduction of infection into the organization;
- taking measures to prevent the spread of coronavirus infection (COVID-19) in teams in organizations;
- implementation of organizational and technical measures to prevent infection of workers;
- other organizational measures to prevent infection of workers.

180. The rules present requirements for safe transportation workers, organizing medical examination at the entrance points, provision with disinfection equipment and disinfectants, catering facilities, construction camps, etc. Also, SanN&R describes requirements on organizing an isolator in medical centers (if any) in case if patient is identified with a high fever or with

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individual symptoms of an acute respiratory viral infection (lack of smell, dry cough, malaise, etc.) and isolating him from the work team.

181. All managers have to conduct introductory training for new workers and routine training for working staff. The rules provide an action plan for cases when workers with COVID-19 symptoms.

182. Section 5.1.4 of SanN&R provides specific norms for construction sites. The section pays special attention to dust and provides recommendation for dust generation mitigation and protection. The rules provide a list of Personal Protection Equipment for COVID-19.

183. The document also provides instruction on communication with local health care institutions for organizing regular medical examination of workers and mobilization in case of identification infections.

### **Mitigation measures**

- In conditions of pandemic risk organize works in accordance with Temporary Sanitarian Norms and Rules (SanN&R) # 0372-20;
- Ensure proper recording and reporting of any cases of infection and undertaken actions.

### **Cultural heritage**

184. The land and vegetation clearing, earthmoving activities during the construction of the new WDU and extension of existing ones, pipelaying works may affect the archaeological heritage in the project areas. Near to the project no Cultural Heritage Objects, therefore on impact on Cultural Heritage.

185. Nevertheless, there is still possibility that some artifacts could be found during digging of foundation pits. For that case, the following mitigation measures will be undertaken in accordance with the procedure indicated in the Law of RUz “On Protection and Use of Objectives of the Archeological Heritages” (2009). Procedure on chance finds procedure is presented in Annex 4.

### **Mitigation measures:**

- Excavation and other works need to be suspended immediately;
- Area with possible heritage shall be fenced with fencing tape;
- A designated focal point from a local administration (khokimiyat) and representative of Ministry of Culture of RUz need to be informed and invited for assessment of potential heritage and undertaken necessary actions;
- Civil works at the finding place could be recommenced after obtaining permission from the representative of Ministry of Culture of RUz and from focal point from Khokimiyats.

## **7.3 Operation stage**

### **Impact on the air**

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186. No permanent impact on air is expecting during operation phase. Some temporary impact may occur during maintenance works.

### **Mitigation measures**

- Watering of earth during maintenance works
- Immediately replacing defective equipment and removing it from the work site;
- No truck movements in inhabited areas between 22:00 and 6:00.

### **Impact on water**

187. Extensive pumping of ground water from wellfield may impact on ground water level and it may lead to depletion of ground water reserve. A hydrogeological assessment provided by the State Committee on Geology and Mineral Resources establishes a maximal amount of water which could be withdrawn from wellfield without impact on water balance between ground and surface water.

### **Mitigation measures**

- The quality of water supplied for household and drinking needs must comply with the requirements of GOST 2874-82 or regulatory documents of the Republic of Uzbekistan that determine the quality of drinking water.
- When storing water used for household and drinking needs, reagents, internal anti-corrosion coatings, as well as filtering materials that meet the requirements of the sanitary and epidemiological department of the Ministry of Health of the Republic of Uzbekistan should be used for use in the practice of household and drinking water supply.
- After the commissioning of this facility, it is necessary to ensure the proper and efficient use of water resources and to prevent water losses and leaks and excessive water consumption - installation, operation and periodic checking of water meters at water users;
- Conduct awareness program among population to ensure the sustainable operation of the constructed water supply system.

### **Soil quality**

188. The main possible impact on soil during the project operation is risk related to land subsidence in case of excessive extraction of ground water at the wells in RCA Pshagar territory. To avoid such situation, water from wells has to be pumped strictly in the amount, indicated in the design documents and permission for special water use. Water Supply Operation Company will have to obtain the permission from State Committee on Ecology and Environment Protection (Goskomecology).

### **Mitigation measures:**

- The top soil of about 30 cm depth shall be removed and stored separately during excavation work, and after the construction of the main trunk pipes the same soil shall be replaced on the top, in unpaved areas;

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- The excess top soil and earth reminded after construction new WDFs will be used at other project sites or disposed at the places prior approved by local government authorities and The State Committee for Ecology and Environmental protection (Goskomecology);
- To minimize soil compaction, movement of all type techniques will be allowed only through identified assess roads;
- Contractors will be required to use only authorized carriers with getting all necessary permissions per respective national legislation.

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**Table 13:** Environmental and Social Mitigation Plan

Impact	Mitigation measure	Responsibility	Cost
<b>Pre-construction stage</b>			
Project design	<ul style="list-style-type: none"> <li>During detail design stage layout WDFs, route of main trunk and water distribution networks will be updated with consideration of minimization of impact on environment and population during construction and operation phases;</li> <li>Ensure that first sanitarian zone (within 15 meters radius from the well) for ground water intakes is in compliance with national standards ShNK 2.04.02-19 “Water supply. External networks and facilities” (1997) and the territory is properly fenced;</li> </ul>	PMC develops detail design PCU monitor compliance	No cost required
Lack of proper environmental requirements	<ul style="list-style-type: none"> <li>Ensure that ESMP is included in bidding documents.</li> <li>Ensure that environmental and social covenants, tools for resolving issues with Contractors non-compliance with established requirements are included in the bidding documents (such as penalties for violence environmental requirements and etc.) and further in contracts.</li> <li>Include list of required national approval and licenses (indicated in chapter 1, Table 1) are included in the bidding documents and responsible for receiving such permission are identified.</li> </ul>	PCU, PMC’s Environmental Specialist	No cost required
Improper assessment of bidders’ environmental capacity	<ul style="list-style-type: none"> <li>IA with assisting Project Management Consultant’s (PMC) environmental specialist will ensure inclusion of environmental provision along with ESMP in the bidding documents and in contracts for Contractors;</li> <li>Bids evaluation needs to be done with consideration of: capacity of bidders to meet EMSPs requirements, proposing adequate budget efficient for implementation ESMP, existence of good practice in environmental performance within other similar projects;</li> </ul>	CSA, PCU	No cost required
Non-compliance with national environmental legislation in term of conduction environmental impact assessment and required permission	<ul style="list-style-type: none"> <li>Prepare ZVOS and submit it to Provincial Committee for Ecology and Environmental protection (Goskomecology) for revision and approval.</li> <li>Include the requirements indicated in EA into the final ESMP.</li> </ul>	Water Supply Operating Company (WSOC)	Will be founded WSOC budget
Generation of different potential environmental impacts due to	<ul style="list-style-type: none"> <li>If any changes in the project design will take place, the ESMP has to be updated accordingly.</li> </ul>	WSOC, PCU with PMC	Included in PMC contract

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Impact	Mitigation measure	Responsibility	Cost
changes in design, layout			
Non-compliance with national and international requirements during conduction bidding for purchase machinery and mechanisms	<ul style="list-style-type: none"> <li>Goods procured for project implementation will be done in compliance with IFC Exception List (Project Negative/ Exclusion List) set forth at Appendix 7 of the Project ESMF Document;</li> <li>Environmental specifications have to be included in bidding packages for purchase machinery within the project. Particularly, toxic level of machinery must meet “Euro 3” environmental requirements as defined by national regulations<sup>12</sup>;</li> </ul>		
Improper SEMP and SSEMP development	<ul style="list-style-type: none"> <li>Within 30 days after contract award and prior to commencing any physical works, Site-specific Environmental and Social Management plan (SSESMP) will be developed by the Contractors under the guidance of the PMC, and be endorsed by PMC before submission to PIU for approval;</li> <li>In addition to SSESMP, Topic Specific SEMPs need to be prepared by Contractors, endorsed by PMC and approved by PIU for the following activities: Traffic Management Plan for construction of distribution network within settlements, Waste management Plan for sites with demolishing works, Hazardous Wastes Management Plans as described in the next sub-sections, Construction Camps Management Plan and Occupational Health and Safety Plan (OHS Plan);</li> </ul>	Contractors develop SSEMP PMC review and endorses PIU approve	Included in the Contractors budget
<b>Construction stage</b>			
Air pollution	<ul style="list-style-type: none"> <li>Apply watering of construction sites and roads inside settlements during dry season;</li> <li>Cover transported bulk materials;</li> <li>Control speed limitation for vehicles during movement inside of settlements - no more than 40 km/h;</li> <li>All vehicles and techniques must comply with technical requirements and have to pass regular inspection as indicated into the national standards<sup>13</sup>;</li> <li>Prohibit open burning of solid wastes generated particularly from labor camps and construction activities;</li> <li>Clean wheels and under carriage of haul trucks prior to leaving construction site;</li> </ul>	Contractors implement  PIU and PMC monitor implementation	Included in the Contractors budget

<sup>12</sup> Resolution of President of RUz “On measures for further development of production at the Samarkand automobile plant and renewal automobile park”, dated from December 14, 2006

<sup>13</sup> “O’z DSt 1057:2004 Vehicles. Safety requirements for technical conditions” and “O’z DSt 1058:2004 Vehicles. Technical inspection. Method of control”.

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Impact	Mitigation measure	Responsibility	Cost
	<ul style="list-style-type: none"> <li>• Restrict demolition activities during period of the high winds or under more stable conditions when winds could nevertheless direct dust towards adjacent communities;</li> <li>• Conduct monitoring of dust level in front of settlements located close to constructed WDFs. In case of exceeding standards for dust level for this area (0.15 mg/m<sup>3</sup>)<sup>14</sup> additional mitigation measures for dust control need to be undertaken – more often watering or installation of dust screen;</li> <li>• Pipe lying works in street with width less than 2 meters, needs to be conducted manually.</li> </ul>		
Noise and vibration	<ul style="list-style-type: none"> <li>• Install acoustic barrier next to the WDFs, “Soychi Well”;</li> <li>• For the rest of WDFs acoustic screens have to be used if construction activities will be implemented closer than 100 m;</li> <li>• If noise level in front of houses near to WDFs “Monguzar WT&amp;Well”, “Soychi WT” and “Adrobod” increases 68 dB during the day time, install acoustic screen;</li> <li>• During construction period establish limits on speed for vehicles inside of settlements (40 km/h);</li> <li>• Operation of heavy equipment shall be conducted between 7 am and 7 pm only, limitation on speed for vehicles;</li> <li>• In case of receiving any complaints from population, noise measurements need to be conducted and in case of exceeding established standards, additional mitigation actions for decreasing noise level need to be undertaken (establishing temporary sound absorbing barriers and others);</li> <li>• Schedule construction so as to minimize the multiple use of the most noisy equipment near sensitive receivers (living houses or school);</li> <li>• Use of Personal Protective Equipment (PPE) by workers involving in demolishing and construction works in conditions of increased noise level (more than 80dB) is mandatory;</li> <li>• Conduct weekly noise measurements at the all WDFs. Make sure that noise level not exceed 55 dB during the day time;</li> <li>• During pipe lying works in the site where digging of tranche will be implemented closer than 2 meters to the wall use compact less noisier pipe lying techniques;</li> <li>• Inform population about anticipated works;</li> </ul>	<p>Contractors implement</p> <p>PIU and PMC monitor implementation</p>	Included in the Contractors budget

<sup>14</sup> SanR&N RUz No.0179-04 Hygienic norms. List of Maximum Allowable Concentrations (MACs) of pollutants in ambient air of communities in the Republic of Uzbekistan including Annex 1

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Impact	Mitigation measure	Responsibility	Cost
	<ul style="list-style-type: none"> <li>• Schedule land leveling so as to minimize the multiple use of the noisiest equipment on the site;</li> <li>• Do not use several machineries at the same time within the distance closer than 75 meters to the north border of the construction site “Soychi Well”;</li> <li>• Use of Personal Protective Equipment (PPE) by workers involving during construction stage in the sites where noise level will exceed 80 dB as per national regulation;</li> <li>• Inform population about anticipated works;</li> <li>• Schedule construction works between 8 am and 7 pm. In case of extension working hours, inform community (RCA Pshagar) in advance;</li> <li>• Conduct visual observation of temporary faced to construction site on integrity</li> <li>• Nevertheless, noise level monitoring needs to be implemented on the regular in accordance with the methodology indicated into the Environmental Monitoring Plan (Chapter 8, Table 14). In case of exceeding noise level during construction phase on 3 dB in comparison with baseline situation, additional mitigation measures, such as construction acoustic screen could be applied;</li> <li>• Conduct a visual observation of the houses and administrative buildings near to WDF “Soychi Well” before commissioning construction works and on monthly base during works of pilling machinery. In case of any cracks or damages mitigation measures need to be applied: pre-drilling, using alternatives non-impact drivers, using cast-in-place or auger cast piles and etc.</li> <li>•</li> </ul>		
Pollution of surface and ground water	<ul style="list-style-type: none"> <li>• Construction and labor camps, including storage places for lubricant, fuel and other oils will be located 100 m away from water bodies;</li> <li>• Conduction of refueling, oil replacement or repairing works will be banded at the area within 50 m from water streams;</li> <li>• Sanitary water and solid wastes will not be released directly into water streams;</li> <li>• Topsoil stripped material shall not be stored where natural drainage will be disrupted;</li> <li>• Water samples will be taken and compared with the baseline monitoring results obtained in the preconstruction stage. Location of monitoring points, frequency and monitoring substances are presented in Environmental Monitoring Plan (Chapter 8)</li> <li>• All works related to digging on the depth more than 2 meters need to be conducted during non-irrigation season. The irrigation season in that region is May-August.</li> <li>• If this period could not be avoided, use standards technology for construction in areas with high water logging: pumping water into the nearest drainage canal.</li> </ul>	Contractors implement  PIU and PMC monitor implementation	Included in the Contractors budget

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Impact	Mitigation measure	Responsibility	Cost
	<ul style="list-style-type: none"> <li>Conduct monitoring of water quality in the hand pumps houses located close to the rehabilitating or constructing new WDFs needs to be undertaken by Contractor on the monthly base (Chapter 8). In case of exceeding standards, ground water pollution source(s) need to be identified and repaired.</li> </ul>		
Soil contamination	<ul style="list-style-type: none"> <li>The top soil of about 30 cm depth shall be removed and stored separately during excavation work, and after the construction of the main trunk the same soil shall be replaced on the top, in unpaved areas;</li> <li>The excess top soil and earth reminded after construction new WDFs will be used at other project sites or disposed at the places prior approved by local government authorities and The State Committee for Ecology and Environmental protection (Goskomecology);</li> <li>To minimize soil compaction, movement of all type techniques will be allowed only through identified assess roads;</li> <li>Contractors will be required to use only authorized carriers with getting all necessary permissions per respective national legislation.</li> </ul>	<p>Contractors implement</p> <p>PIU and PMC monitor implementation</p>	Included in the Contractors budget
Hazardous materials	<ul style="list-style-type: none"> <li>Used oil shall be collected into containers placed at the concreted sites and disposed to national oil company designated for accepting and treatment of used oils;</li> <li>Refueling vehicles and replacement oils also have to be conducted in special designated and properly equipped places. Emergency facilities have to be at the place for elimination of accident of oil spills.</li> <li>Used batteries have to be collected separately and transferred to the local branches “Cvetmet” for further disposal.</li> </ul>	<p>Contractors implement</p> <p>PIU and PMC monitor implementation</p>	Included in the Contractors budget
Non-hazardous materials	<ul style="list-style-type: none"> <li>Segregation of wastes on recyclable and non-recyclable wastes;</li> <li>Obtain permit on disposal all types of wastes;</li> <li>Selling recyclable wastes to relevant organizations (paper, scraps, accumulators) and timely disposal of non-recyclable wastes to the landfill, determinate by local hokimyat.</li> <li>Providing hydro isolated septic tank for collecting waste waters at the camp sites and bio toilets for workers at the construction sites and timely disposal of waste waters to the local waste water treatment plants.</li> <li>Burning of waste on any construction site is forbidden with the exception of stub and small branches from felled trees and bushes, which is better to be burned in order to avoid pest dissemination;</li> <li>Prohibit discharge of sewage or oily water in surface water courses or soil;</li> <li>Create a safe (sheltered with concrete foundation) storage facility for water.</li> </ul>	<p>Contractors implement</p> <p>PIU and PMC monitor implementation</p>	Included in the Contractors budget

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Impact	Mitigation measure	Responsibility	Cost
Losses of assets, trees and crops	<ul style="list-style-type: none"> <li>• Site cleaning for extension existing and construction new WDFs should be done exactly within marked area.</li> <li>• If impact to any private or public assets is required during the construction, the contractor will inform affected households in advance, fully restore or reimburse losses as agreed with affected persons, and maintain records including visual records of the pre-and post-project state of land and assets;</li> <li>• If cutting trees is unavoidable, to compensate losses as indicated in the RPF for this project;</li> <li>• Do not use chemicals or burning for removal of vegetation;</li> <li>• Greening of WDFs as part of the project design.</li> </ul>	<p>Contractors implement</p> <p>PIU and PMC monitor implementation</p>	Included in the Contractors budget
Socio-economic resources	<ul style="list-style-type: none"> <li>• Inform community in advance about planning works;</li> <li>• For construction works which do not require specific skills, hire local population as much as possible;</li> <li>• Conduct explanatory work among workers about the local culture and traditions;</li> <li>• Any resettlement impacts that cannot be identified at preparation stage (i.e., are accidental or concern temporary access) will be fully restored and/or compensated by the Contractor.</li> </ul>	<p>Contractors implement</p> <p>PIU and PMC monitor implementation</p>	No cost required
Health and safety issues	<ul style="list-style-type: none"> <li>• Contractor and PIU will inform population about anticipated works in the settlement in advance;</li> <li>• Contractors will require to develop a Traffic Management Plans with clear indication routes of vehicles' movements, placement special signs, and speeding allowance inside of the settlements and schedule transportation activities by avoiding peak traffic periods;</li> <li>• The Traffic Management Plans will be approved by Traffic Police and disclosed to local communities prior commencement of construction works on respective sites;</li> <li>• Clear signs will be placed at construction sites in view of the public, warning people of potential dangers such as moving vehicles, hazardous materials, excavations etc. and raising awareness on safety issues.</li> <li>• Contractor will ensure safe access to all sidewalks, houses, public buildings etc. throughout the time of construction;</li> <li>• Contractor will fully restore or improve all sidewalks, entrances, and points of access to buildings;</li> <li>• Contractor will sequence works so as to cause minimal disturbance to residents;</li> <li>• All construction sites will be properly lightened and fenced;</li> <li>• Development of Site Specific Plans for campsites;</li> </ul>	<p>Contractors implement</p> <p>PIU and PMC monitor implementation</p>	Included in the Contractors budget

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Impact	Mitigation measure	Responsibility	Cost
	<ul style="list-style-type: none"> <li>• After completion works all roads shall be rehabilitated at least up to condition of pre-construction stage.</li> <li>• Development Occupation Safety and Health Plan, which covers among others the following topics: usage of PPE, working procedure with hazardous materials (such as asbestos materials, PCBs etc.), training activities and others. The workers have to be provided with appropriate living conditions: safe water supply, washing conditions.</li> <li>• Comply with requirements of Labor Code of Uzbekistan (1998) and standards on work and health safety;</li> <li>• Ensure that all site personnel have a regular E&amp;S training and basic level of environmental awareness training;</li> <li>• Ensuring all workers are provided with and required to use personal</li> </ul>		
Construction camps	<ul style="list-style-type: none"> <li>• Development of Separate Site Specific ESMP for labor/construction camps (or part of general SSESMP).</li> <li>• SSESMP for labor/construction camps will describe waste collection and disposal procedure, set up of camp facilities (such as a storage place for construction materials and techniques if any, laundry and toilets, access roads).</li> <li>• If washing equipment and vehicle is planning to be conducted at the labor/construction camp's site, appropriate wastewater treatment facilities have to be organized on the camp and respective permissions on water intake and waste water disposal need to be received by Contractor from Goskomecology</li> <li>• Provide safe and adequate living conditions for workers, such as dining rooms, toilets, shower rooms etc.</li> <li>• Contractors shall instruct all the workers to act in a responsible manner after completion works, construction camps.</li> </ul>	Contractors implement  PIU and PMC monitor implementation	Included in the Contractors budget
Impact due to COVID-19	<ul style="list-style-type: none"> <li>• In conditions of pandemic risk organize works in accordance with Temporary Sanitarian Norms and Rules (SanN&amp;R) # 0372-20;</li> <li>• Ensure proper recording and reporting of any cases of infection and undertaken actions.</li> </ul>	Contractors implement  PCU and PMC monitor implementation	Included in the Contractors budget
Archeological heritages: Chance of finding heritage	<ul style="list-style-type: none"> <li>• Excavation and other works need to be suspended immediately;</li> <li>• Area with possible heritage shall be fenced with fencing tape;</li> <li>• A designated focal point from a local administration (khokimiyat) needs to be informed and invited for assessment of potential heritage and undertaken necessary actions;</li> </ul>	Contractors implement  PCU and PMC monitor implementation	Included in the Contractors budget

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Impact	Mitigation measure	Responsibility	Cost
	<ul style="list-style-type: none"> <li>Civil works at the finding place could be recommenced after obtaining permission from the representative of Ministry of Culture of RUz and the focal point.</li> </ul>	<p>Representative from Khokimiyat assist in assessment and undertake necessary actions</p>	
<b>Operation phase</b>			
Impact on air	<ul style="list-style-type: none"> <li>Periodically water down temporary roads on site;</li> <li>Immediately replacing defective equipment and removing it from the work site;</li> <li>No truck movements in inhabited areas between 22:00 and 6:00.</li> </ul>	WSOC	Included on WSOC operational costs
Impact on water resources	<ul style="list-style-type: none"> <li>The quality of water supplied for household and drinking needs must comply with the requirements of GOST 2874-82 or regulatory documents of the Republic of Uzbekistan that determine the quality of drinking water.</li> <li>When storing water used for household and drinking needs, reagents, internal anti-corrosion coatings, as well as filtering materials that meet the requirements of the sanitary and epidemiological department of the Ministry of Health of the Republic of Uzbekistan should be used for use in the practice of household and drinking water supply.</li> <li>After the commissioning of this facility, it is necessary to ensure the proper and efficient use of water resources and to prevent water losses and leaks and excessive water consumption - installation, operation and periodic checking of water meters at water users.</li> <li>Conduct awareness program among population to ensure the sustainable operation of the constructed water supply system.</li> </ul>	WSOC	Included on WSOC operational costs
Soil pollution	<ul style="list-style-type: none"> <li>The top soil of about 30 cm depth shall be removed and stored separately during excavation work, and after the construction of the main trunk pipes the same soil shall be replaced on the top, in unpaved areas;</li> <li>The excess top soil and earth reminded after construction new WDFs will be used at other project sites or disposed at the places prior approved by local government authorities and The State Committee for Ecology and Environmental protection (Goskomecology);</li> <li>To minimize soil compaction, movement of all type techniques will be allowed only through identified assess roads;</li> <li>Contractors will be required to use only authorized carriers with getting all necessary permissions per respective national legislation.</li> </ul>	WSOC	Included on WSOC operational costs

Subproject: Construction of Water Supply in Pshagar Rural Citizens' Assemblies of Zomin district of Jizzak region

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Impact	Mitigation measure	Responsibility	Cost
	<ul style="list-style-type: none"> <li>Permits for waste disposal should be received from Provincial Goskompriroda.</li> <li>Sludge from HH septic tanks has to be timely disposed at the municipal waste area (located . Untimely disposal of generated sludge and place of its disposal will be provided in environmental permission (limits on sludge disposal) which “Suvoqova” has to get prior commissioning of WTP.</li> </ul>		
Health safety	<ul style="list-style-type: none"> <li>Providing required facilities: storage of SHC in well ventilated rooms;</li> <li>Applying special marking for containers with this agent;</li> </ul>	WSOC	Included on WSOC operational costs
Over extraction of ground water	<ul style="list-style-type: none"> <li>Volume of extracted water has not exceed established threshold in 480 m<sup>3</sup>/day (240 m<sup>3</sup>/day for each well)</li> </ul>	WSOC	Included on WSOC operational costs

## **8 ENVIRONMENTAL AND SOCIAL MONITORING PLAN**

189. Environmental and social monitoring during project implementation should provide information about its actual environmental impacts, social consequences, the effectiveness of mitigation measures and compliance with the ESMP. Such information enables the PIU and the Supervision Consultant to evaluate the success of mitigation measures and compliance of the contractors' activities as part of project supervision and allows corrective action(s) to be implemented in a timely manner, when needed.

190. Environmental monitoring will focus on compliance of various labor and ESHS requirements, implementation of mitigation measures identified in ESMP and SSESMP and corrective measures (if any). Standard checklists will be used to monitor and on compliance issues. The contractors will carry out compliance inspection on a daily basis; the RPIU and CSC will do random supervision of compliance during regular inspections.

191. For the environmental quality, the monitoring plan is presented in Table 14. If as a result of this monitoring, exceedance of compliance and standard are observed, corrective actions will be proposed by the CSC and implemented by the contractors in a timely manner.

192. The Environmental and Social Monitoring Report will focus on the implementation of the ESMP and ARAP. It will (i) verify the compliance to regulations, contract agreements, the ESMP and ARAP, (ii) summarize the monitoring results of environmental quality, capacity building and accidents, (iii) review the implementation of GRM; and (iv) recommend corrective actions or amendments of the ESMP, SSESMP and ARAP.

193. Separately, WB experts will also carry out bi-annual site-specific visits to review compliance. In the case of non-compliance, the PIU would investigate the nature and reason(s) for non-compliance, and a decision would have to be made on what is needed to bring the project into compliance.

### **8.1 Environmental and Social Reporting**

194. Results of environmental performance including monitoring activity have to be properly documented and reported. In accordance with national legislation, each contractor has to perform a log book with information about conducted training on ESHS for workers, book for registration accidents during the civil works, book a complaint log, a daily health log from COVID. In case of conduction instrumental monitoring, original records on results of required instrumental environmental monitoring (air and water quality) also need to be kept in the separate file for records.

195. It is recommended, that prior commencement of the civil works Contractor with assistance of RPIU's Environmental and Social Specialists will develop a format for site inspection to optimize a process of environmental and sociological supervision. The format may could be in form of checklist with list of mitigation measures to be implemented at the construction sites, their performance status and some explanations as required.

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196. The reporting of progress of implementation of the ESMP would be the responsibility of the subproject beneficiaries and such reports would be submitted to RPIU, as relevant monthly. Monitoring reports during project implementation would provide information about key environmental and social aspects of the subproject activities, particularly on the environmental impacts and effectiveness of mitigation measures. Such information enables the PIU and WB to evaluate the success of mitigation as part of project supervision, and allows corrective action to be taken when needed.

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**Table 14:** Environmental Monitoring Plan

Mitigation measures	Parameter to be monitored	Location	Frequency	Responsibility	Standards	Cost
<b>Construction Stage</b>						
Air quality	NO <sub>x</sub> , SO <sub>2</sub> , CO, Dust	Construction sites located within settlements	Ones per month	Contract will hire certified laboratory to conduct analysis	Hygienic norms. List of Maximum Allowable Concentrations (MACs) of pollutants in ambient air of communities in the Republic of Uzbekistan including Annex 1. SanR&N RUz No.0179-04 <sup>15</sup>	Cost for hiring laboratory to conduct measurements on monthly base are included in PSC budget  Cost is included in Contractor's budget - 6 measurements for 6 month – 500 USD
Noise level	Noise level	1. Construction sites with demolishing works 2. Living houses located next to construction sites	Per complaints from people on noise disturbance during construction	Contractor	1. Noise level during the day time should not exceed 55 dB and for night time – 45 dB 2. Noise level should not exceed 3 dB than baseline – 75 dB day time and 73 dB – night time	Contractor's contract. 1 devise for noise measurements is 200 USD
Vibration	Integrity of houses	Houses and buildings located close to construction site and pipe lying area	Once before construction activity will start	Contractor implements and PMC monitors	No new cracks	Cost is included in the Contractor budget
Water quality	1. Visual monitoring of surface water on existence oil film and turbidity 2. Oil products, dry residual, pH, ammonia, SO <sub>4</sub>	Water bodies located next to construction sites and water from hand pumps	1. Visual during each visit of construction site (at least weekly). 2-3. Baseline – before construction works and after on monthly base and per complaints from people	1. Contractor  2-3. Contract will hire certified laboratory to conduct analysis.	1. Absence of oil films on the water bodies surface.  2 If baseline shows non exceeding standards indicated in "Sanitarian requirements for development and approval of maximum allowed discharges (MAD) of pollutants discharged	Included in Contractor's contracts.  Cost for hiring laboratory to conduct measurements on monthly base are included in PMO

<sup>15</sup> National standards comply with international IFC standards

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Mitigation measures	Parameter to be monitored	Location	Frequency	Responsibility	Standards	Cost
	3. Ground water quality monitoring (from hand pumps)				into the water bodies with waste waters”. SanR&N No 0088-99, this standards need to be used. If baseline exceeds standards use baseline indicators for comparison. 3. If baseline shows non exceeding standards indicated in “Drinking water.” O’z/DST 950:2011 – Drinking water. Hygienic requirements and quality control this standards need to be used. If baseline exceeds standards use baseline indicators for comparison.	budget - 6 measurements for 6 month is 900 USD
<b>Operation Stage</b>						
Air quality	Noise level	Pump Stations (Wells)	1. Ones per three years as part certification of work places 2. Per complaints from people on noise disturbance due to work of pump station	WSOC	1. "SanitarianNorms of allowed level of noise at the construction sites” SanR&N №0120-01. 2. SanR&N No.026709 Sanitarian Rules and Norms on providing allowed noise level into the living building, public building and territory of living areas	Cost is included into the annual budget of WSOC
Water quality	Amount of water extracted from the Wells	Monguzar Well and Soychi Well	Daily	WSOC	The volume has not to exceed a threshold established by State Committee on Geology and Mineral Resources – 480 m <sup>3</sup> /day (240 m <sup>3</sup> /day for each well)	Cost is included into the annual budget of WSOC
Water quality	Monitoring in accordance with 13.060.20. Drinking water. O’z DST 950:2011 (instead of O’z DST 950:2000) – Drinking water. Hygienic requirements and quality control.					Cost is included into the annual budget of WSOC

## 9 INFORMATION DISCLOSURE, CONSULTATION AND PARTICIPATION

197. One of the main goals of the ESMP is to facilitate the participation of all stakeholders and local communities at all stages of the project cycle: from the pre-construction phase and construction activities to its operation. In this regards, a consultation was held in the project district to capture the stakeholders' opinions about the project, and agree on the project activities.

198. Prior to the public consultation several meetings were conducted with internal and external stakeholders, such as representatives of the provincial and districts level committee on Ecology and Environment Protection, district Khokimiyats and makhallas, land cadaster committee, district water supply agency (Suvoqova) and district energy entities.

199. Public consultation (PC) was conducted on February 19, 2022 at the School #5 RCA Pshagar of Zomin district. Due to the Covid-19 Quarantine restrictions consultations were carried out in accordance with the national sanitary norms and regulations<sup>16</sup>. Representatives of the settlements Pshagar, representatives of local administration, design company "JIZZAX TADQIQOT" LLC participated the meeting. PC participants were introduced with project's main features, results of environmental assessment and preliminary results of finding in term of resettlements issues and planning activities. The consultant introduced Grievance Redress Mechanism and WB requirements on public disclosure process.

200. The participants were explained that the project currently on the detail design stage. If any changes in the project design will take place, the environmental assessment will be revised per new circumstances and new round of public consultation will be conducted with affected people.

201. During the PC people were requested to give their opinions and suggestions. In addition, participants were provided with contact information of PIU environmental specialist for further suggestions and questions.

202. The stakeholders and consultation participants were informed that Contractor would install an informative banner with information on project objectives, activities, implementers, schedule of construction works, deadlines, contact information and logbooks for complaints and suggestions on each construction site.

203. Among 40 participants from Pshagar settlement surrounding the project site, 2 were females. The main issues raised during the public consultation in regards environmental issues are presented in the Table 14:

**Table 14. Issues Raised During Public Consultation**

#	Issues raised	Answer provided
1	Is it possible to start construction as soon as possible?	Construction will start after the necessary procedures in the paperwork are completed. We are trying to speed up the process.

<sup>16</sup> Temporary Sanitarian Norms and Rules (SanN&R) # 0372-20 "On organization of performance of state agencies and other organizations, commercial entities in limited measures condition due to pandemic COVID-19»

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#	Issues raised	Answer provided
2	How long will the work take?	All the works will be carried out within a year.
3.	How many water towers will be built?	There will be Water towers – 3 and Water wells - 2.
4	You will install water pipes, who will bring them to our homes?	This issue will be resolved at the mahalla level. Since the project does not provide for piping
5	How will the issue with payment for water be solved?	payment for water will be made according to the tariff plans established by the state.
6	Who will bring water pipes to households?	After the transfer of wells to the balance of Suvtaminot. Suvtaminot will connect households and install meters. And households will pay for water according to the established tariffs.

204. The participants noted the importance and high expectations from this project as the local residents of RCA Pshagar will be provided with water for household, drinking and domestic needs, which they currently do not have.

205. This ESMP incorporates comments and suggestions from all concerned stakeholders. The final ESMP report will be made available on local language on RIDP official website and in English on WB's website.

206. As part of information disclosure, the final version of ESMP will be translated into local language and will be delivered to local communities and relevant authorities (hokimiyats). The final ESMP report will be sent to Ecology and Environment Protection Committee in Jizzak region for further use during the construction and operation phases.

207. Future consultations for project stakeholders shall follow as mentioned below.

- (i) During detailed design stage, in case of any major changes in the design/alignment/location, the ESMP will be updated accordingly. The PSC will hold at least one public consultation meeting at early stages to solicit perceived impacts, issues, concerns and recommendations from affected communities.
- (ii) Prior to construction, the PSC will conduct an intensive information, education and communication campaign (IEC) to ensure the sufficient level of awareness/information among the affected communities regarding the upcoming construction, its anticipated impacts, the grievance redress mechanism, contact details and location of the PSC, and status of compliance with the Government's environmental safeguard requirements. Among others, the information banners containing information about the subproject, implementation schedule and contact details of the executing agency and Contractors will be installed at the strategic locations within the subprojects' main areas of intervention. The grievance redress procedure and details will be posted at the offices of the district branches of PSC, PIU and district hokimiyat.

## 10 GRIEVANCE REDRESS MECHANISMS

208. The PIU has developed an appeal mechanism based on the legislation of the Republic of Uzbekistan

## Rural Infrastructure Development Project

209. RIDP is implementing an information system for managing complaints, including citizens' complaints – the Grievance Redress Mechanism (GRM).

210. The main purpose of the RIDP GRM is the process of obtaining prompt, objective information, evaluating and reviewing appeals (applications, proposals, complaints, requests, positive feedback) at all stages of the project implementation, which are received from citizens / beneficiaries to further improve their work. Strengthen communication with project beneficiaries and provide channels for feedback, as well as identify and solve problems, increase transparency and accountability.

211. The dissemination of information about the GRM is carried out through the following activities:

- conducting a presentation by PIU specialists to local authorities, (DH);
- at public hearings, trainings conducted by RIDP staff. After the training, RIDP Qishloq facilitators and regional PIU specialists on ESS conduct a presentation;
- Banner on site visibly displaying contact information for all GRM channels in the case of citizen questions or complaints;
- the official website has a section of the GRM.

212. All appeals and complaints of citizens that are received within the framework of RIDP are sent to a single system for further processing and control.

### *Channels for submitting requests.*

<p>1. Helpline: + 99871 232-63-32,                  2. Social networks (Facebook-QIRL qishloq infratuzilmasini rivojlantirish loyihasi); telegram - +99899 225-63-32                  3. RIDP website: www.ridp.uz                  4. Oral or written appeals, Received in the course of the project by contractors, local authorities;                  5. Incoming correspondence on purpose in RIDP reception;                  6. Incoming correspondence on to the GRM email address: ridp@mineconomy.uz                  7. PIU Office phone.: + 99871 232-63-32 (reception)                  8. PIU address: 45A I. A. Karimov Avenue, Tashkent, Republic of Uzbekistan.                  9. Complaint box.</p>	<p>1. Requests are recorded in the log incoming correspondence of the GRM and they are accepted for consideration provided that the following data is reported:</p> <ul style="list-style-type: none"> <li>• last name, first name, patronymic;</li> <li>• registration and residence address or phone number;</li> <li>• content of the appeal;</li> <li>• other background information</li> </ul> <p>1. In cases where requests have been received in the absence of any of the above data, it is recorded in the incoming mail log correspondence of the GRM and is notified the sender, and the results of the appeal will be published in the local media for example, on the RIDP website.</p> <p>2. Appeals can be submitted anonymously. Confidentiality must be provided in all cases, including number, when the identity of the person submitting the application the treatment is known, in order to avoid stakeholder conflicts</p>
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## Rural Infrastructure Development Project

213. The person who sent the request will receive a notification in which the Social Safeguards specialist will inform by phone or through other channels of the GRM:

1. Full name of the contractor (project employee) to whom the request was sent
2. Terms of execution (minimum 15 days, maximum 30 days from the date of registration)
3. The terms and the course of actions are determined in accordance with the instructions of the GRM RIDP on working with appeals.

214. The notification will be registered in the outgoing mail log. Social Safeguards Specialist. The GRM will assist the applicant at all stages of the consideration of their application and ensure that their application is properly considered.

215. If the citizen/beneficiary is not satisfied with the decision received as a result of the consideration of the application, he/she has the right to appeal. The appeal is considered by the RIDP for consideration of appeals.

216. After the appeal review, the citizen/beneficiary who is dissatisfied with the decision received as a result of the review has the right to appeal the decision in court.

## Annexes

### Annex 1: Conclusion (No. 358-Э of 08/10/2021) of the State Environmental Expertise



O'ZBEKISTON RESPUBLIKASI EKOLOGIYA VA ATROF-MUHITNI MUHOFAZA QILISH  
DAVLAT QO'MITASI  
JIZZAX VILOYATI EKOLOGIYA VA ATROF-MUHITNI MUHOFAZA  
QILISH BOSHQARMASI

130116 Jizzax shahri SH.Rashidov shox ko'chasi 72-uy, tel: (0 372) 222-40-79, faks: (0 372) 222-41-99,  
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## DAVLAT EKOLOGIK EKSPERTIZASI XULOSASI

По объекту: Проект заявления о воздействии на окружающую среду (ЗВОС) строительство систем водоснабжения для обеспечения питьевой водой населения на территории ССГ «Пшагар» Зааминском районе Джизакской области.

Заказчик: ООО "JIZZAX TADQIQOT"

ИНН 205600296

Категория: III, п.7, ПКМ РУз №541 от 07.09.2020 г.

Разработчик: ООО "ЕКОЛОГИЯ"

Эксперт: Агламов Зиёвиддин Махмудович

Организация: ООО "JIZZAX TADQIQOT"

Руководитель: БУРОНОВА МАВЗУДА  
НАСРУЛЛАЕВНА

На рассмотрение ГУП «Центр государственной экологической экспертизы Джизакской области» представлены материалы оценки воздействия на окружающую среду (ЗВОС) строительство систем водоснабжения для обеспечения питьевой водой населения на территории ССГ «Пшагар» Зааминском районе Джизакской области.

Основанием для разработки проекта ЗВОС послужили действующие законы «О дальнейшем совершенствовании механизма оценки воздействия на окружающую среду» утвержденным ПКМ Республики Узбекистан за № 541 от 07.09.2020г. В соответствии с приложением №1, объект экспертизы по видам деятельности отнесен к III категории воздействия на окружающую среду (низкий риск).

Площадь объекта проектируемых работ расположена на территории ССГ «Пшагар» Зааминского района Джизакской области. Вблизи данного объекта расположены жилые дома и проходит дорога.

На участке строительства отсутствует промышленность. Каких-либо материальных и исторических памятников на отведенной территории не имеется.

Территория, выделяемая, под намеченную деятельность не является природоохранной. Деревья и кустарники, подлежащие вырубке по пути прокладки водопроводных труб отсутствуют. Отрицательное влияние на животный мир не ожидается.

Проектирование и строительство объекта предусматривается на основании Постановления Президента Республики Узбекистан о мерах по реализации проекта «Развитие сельской инфраструктуры» с участием Международной ассоциации развития Всемирного Банка и Азиатского Банка инфраструктурных инвестиций под № ПП-4898 от 25.11.2020 г.

## Rural Infrastructure Development Project

Предприятия по строительству, реконструкции скважин, водозаборов, водопроводов, прокладке подземных трубопроводов относятся к разряду небольших предприятий, которые не могут существенно повлиять на социально-экономическую обстановку и уклад жизни людей.

Вместе с тем водоснабжение жилых поселков положительно сказывается на социально-бытовых условиях жизни населения.

При строительстве систем водоснабжения распределительная сеть будет выполнена из полиэтиленовых труб. Полиэтиленовый трубопровод самый экономичный и практичный.

В результате того, что при строительстве систем водоснабжения распределительная сеть будет выполнена из полиэтиленовых труб, то отходы асбестосодержащих материалов отсутствуют.

В состав ССГ «Пшагар» Зааминского района подлежащие обеспечению питьевой водой входят 3 улицы: улица Сойчи; Молгузар; Адробод.

Система водоснабжения жителей улиц КФЙ Пшагар Зааминского района в настоящее время такова:

- жители этих улиц для хозяйственно – бытовых нужд используют родниковую и бутыльную воду.

На территории ССГ «Пшагар» Зааминского района запланировано бурение скважин в количестве – 2 шт для улицы Сойчи и улицы Молгузар.

Обеспечение населения питьевой водой ул. Адробод будет осуществляться от скважины расположенной на территории улицы Молгузар.

Вода используется на хозяйственно-питьевые нужды населения и водопой скота.

Количество домохозяйств расположенных на территории ССГ «Пшагар» Зааминского района Джизакской области - 250 домов. Количество населения проживающих на территории ССГ «Пшагар» Зааминского района Джизакской области обслуживаемой данной системой водоснабжения - 1608 человек, из них 835 чел. мужского населения, 805 чел человек женского населения.

Количество КРС - 501 голов. Количество МРС - 2328 голов. Количество лошадей - 3 голов

На территории населенного пункта расположены следующие муниципальные объекты: школы – 1 шт., детские сады – 1 шт, мечеть – 1 шт.

Основные виды деятельности: животноводство, земледелие. Женская половина населенного пункта, в основном занимается домохозяйством.

Вынужденное переселение. Вопросы относительно отвода земель и переселение подпадают под политику Всемирного банка «Вынужденное переселение». Что касается вынужденного переселения в нашем случае, не было выявлено воздействий, которые могут повлечь отвод земель, ограничения на экономическую деятельность или физическое переселение.

Рабочим проектом определены следующие объемы работ:

- бурение и обустройство скважины – 2 шт;
- установка водонапорной башни на 25 м<sup>3</sup> - 2 шт;
- установка трансформаторной подстанции - 2 шт;
- установка ящика «Каскад» - 2 шт;
- устройство ограждения, ворот и калитки;
- укладка полиэтиленовых труб – длиной – 7,1 км;
- устройство водопроводных колодцев ВК;
- устройство запорных арматур.

Параметры траншеи:

- длина траншеи – 7,1 км;
- глубина траншеи -1,1 м;
- ширина траншеи – 0,8м.

Параметры занимаемой площади водозаборного сооружения:

Территория участка - 900 м<sup>2</sup> x 2= 1800м<sup>2</sup>.

Площадь застройки -20 м<sup>2</sup> x2 = 40 м<sup>2</sup>.

Площадь твердого покрытия -100 м<sup>2</sup> x2 = 200 м<sup>2</sup>.

## Rural Infrastructure Development Project

Площадь озеленения -  $780 \text{ м}^2 \times 2 = 1560 \text{ м}^2$ .

Количество рабочих необходимых для обслуживания проектируемых скважин – 2 человек.

Соединение полиэтиленовых труб осуществляется путем нагревания агрегатом для сварки полиэтиленовых труб.

Соединение стальных труб осуществляется сварочным аппаратом.

Разработка грунта производится экскаватором.

Характер воздействия химических веществ будет временным, обратимым и не окажет существенного вредного влияния на природную среду.

Скважина. В строительство скважины входят: роторное бурение скважины, спуск фильтровой колонны и обсадных труб, разглинизация скважины, засыпка затрубного пространства гравием.

На территории водозаборных сооружений осуществляется:

- установка ящика «Каскад».
- установка водонапорные башни;
- установка трансформаторной подстанции;
- укладка полиэтиленовых труб;
- устройство водопроводных колодцев ВК;
- устройство запорных арматур.
- ограждения, ворот и калитки

Водонапорная башня. Оборудование башни состоит из напорно-разводящего трубопровода, переливной и спускной труб. От насосной станции по трубопроводу вода поступает в нижнюю часть опоры башни. Этот же трубопровод служит для отвода воды из башни к потребителям. Переливная труба заканчивается на наивысшем уровне воды в баке. Для возможности полного опорожнения башни при промывках и ремонтах от нижней части опоры прокладывается специальная грязевая труба.

Для размещения необходимого оборудования с башней устраивается колодец. В котором на водопроводе и спускной трубе устанавливаются задвижки с ручным приводом, а конец переливной трубы выпущен над землей обсыпкой на высоте 3,2 м от уровня земли. От колодца спускная труба отводится с разрывом струи в водосток или открытый кювет.

Для возможности использования башни при пожаротушении и отбора проб воды на напорно-разводящий трубопровод устанавливается стояк диаметром 70мм с двумя запорными вентилями двумя соединительными головками. Заполнение ствола башни водой даёт возможность понижаться горизонту воды от максимального уровня в баке до подошвы опоры башни, что создаёт резервный запас воды, расходуемый при прекращении подачи электроэнергии.

Оценка изменений окружающей среды как последствий выявленных воздействий от данного предприятия следующая:

Во время проведения работ по строительству объекта в атмосферном воздухе будут наблюдаться повышенные концентрации неорганической пыли и продуктов сгорания топлива, возникающие в результате строительных работ и использования строительной техники.

Для оценки выбросов вредных веществ в атмосферу при строительстве данного объекта на состояние атмосферного воздуха произведен расчет максимальных приземных концентраций - оксид железа, оксида марганца, окиси углерода, неорганической пыли, углеводородов, двуокиси азота, сажи и сернистого газа. Суммарный выброс загрязняющих веществ, в атмосферный воздух прогнозируемый за период строительства, составляет 0,02712 т/год.

Из результатов анализа полей приземных концентраций загрязняющих веществ, следует, что на данном объекте не отмечаются уровни загрязнения атмосферного воздуха, превышающие уровни ПДК по сравнению с заданной квотой, таким образом, воздействие на атмосферный воздух при строительстве водопровода является допустимым.

Характер воздействия химических вещества при строительстве данного объекта будет временным, обратимым и не окажет существенного вредного влияния на природную среду. Также при соблюдении, заложенных экологических мероприятий и при соблюдении условий эксплуатации оборудования, предусмотренные, проектом данный объект не окажет существенного влияния на состояние природной среды района проведения работ по строительству систем водоснабжения.

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Эксплуатация скважины и водопроводной трассы не предусматривает возникновение выбросов загрязняющих веществ в атмосферу.

В процессе изучения производства выявлены, что при проведении работ по строительству данного объекта основными отходами являются вскрышные породы, т.е. верхний плодородный слой почвы. Предприятия при проведении работ (строительство скважины, строительство линии подземного водопровода) связанных с нарушением почвенного покрова, обязаны предусмотреть снятие плодородного слоя почвы не менее 10 см по профилю, хранить, и наносить плодородный слой почвы на место после окончания строительства линии подземного водопровода.

В период строительства систем водоснабжения образуются ТБО в результате жизнедеятельности рабочих, при проведении работ по строительству объекта на участке образуется также строительный мусор. Количество отходов зависит от объёма и характера выполняемых работ. В основном это осколки кирпичей, штукатурки, стружка, металлолом. Отходы в виде лома необходимо сдавать во вторчермет. Отходы в виде бумаги необходимо сдавать в макулатуру. Возможны варианты использования отходов в виде осколков кирпича и бетона в качестве заполнителя в бетонных работах.

При проведении работ по строительству объекта ожидается воздействие на почву, а далее на подземные воды загрязнением от строительных растворов (цемент, известь). В результате выпадения осадков ожидается загрязнение территории ливнево - дождевыми стоками. Для предупреждения таких загрязнений на территории необходимо:

1. Растворы извести и цемента производить в специальной посуде;

2. Для приготовления растворов необходимо выбрать площадки, которые в благоустроительных работах будут забетонированы. Эти площадки необходимо покрыть бетоном, устроить временные лотки для отвода стоков во временные лотки. После завершения строительства отстойники очистить от шлама и вывести на свалку. Отстойники демонтировать.

В результате того, что при строительстве систем водоснабжения распределительная сеть будет выполнена из полиэтиленовых труб, то отходы асбестосодержащих материалов отсутствуют.

В период эксплуатации скважины твердые отходы (стекло, бумага и т.д.) необходимо вывозить на свалку в установленном порядке. Бытовой мусор необходимо складировать в металлических контейнерах на специально отведенной площадке. Количество мусора образующегося за период производственного года складывалось из отходов, образующихся в результате жизнедеятельности рабочих, уборки территории выделенной под посадку древесно-кустарниковой растительности необходимой для подавления шума и вибрации, а также распространения загрязняющих ингредиентов и уборки территории с твёрдым покрытием.

Образовавшиеся строительные отходы необходимо складировать на удобном для сбора месте и по мере накопления обеспечить их вывоз в места согласованные с соответствующими организациями.

Таким образом, реализация работ не сопряжена с образованием токсичных отходов. При соблюдении технологического регламента и соблюдении, заложенных экологических мероприятий негативное влияние образующихся отходов на окружающую среду исключено.

Источником водоснабжения для хозяйственно – питьевых нужд для рабочих занятых на строительстве данного объекта является привозная вода (бутилированная). Объем водопотребления составляет - 0,5 м<sup>3</sup>/сут или 0,15 тыс.м<sup>3</sup>/год.

Объем водоотведения равно объему водопотребления.

Для сбора хозяйственно – фекальных стоков на территории строительной площадки запланировано установка переносного биотуалета. По мере накопления стоки вывозятся в места указанные СЭС.

Для смачивания грунта используют воду близлежащих водяных родников.

Для смачивания грунта на строительный период потребуется 499,84 м<sup>3</sup> воды, расход воды является безвозвратным

Источником хозяйственно-питьевой воды для населения 3 улиц служит проектируемые скважины в количестве – 2 шт. Вода используется на хозяйственно-питьевые нужды населения и водопой скота.

Объем водопотребления составляет - 150,051 м<sup>3</sup>/сут или 54,76856тыс.м<sup>3</sup>/год.

Для ввода в эксплуатацию объекта необходимо предусмотреть ряд планировочных мероприятий:

## Rural Infrastructure Development Project

Вокруг скважины необходимо создать зону санитарной охраны, не рекомендуется вблизи зоны строить хозяйственные сооружения, свалки мусора, туалет и т.д. Территорию зоны санитарной охраны, оградить забором или металлической сеткой, поверхность земли должна быть спланирована так, чтобы атмосферные осадки имели сток от устья проектируемых скважин.

Для водозаборов всех категорий следует предусмотреть наличие на складе резервных насосов, при количестве рабочих скважин до 3 – 1 резервный насос.

Качество воды, подаваемые на хозяйственно – питьевые нужды, должно соответствовать требованиям ГОСТ 2874-82 или нормативных документов Республики Узбекистан, определяющих качество питьевой воды.

При хранении воды, используемый на хозяйственно - питьевые нужды, следует применять реагенты, внутренние антикоррозийные покрытия, а также фильтрующие материалы, соответствующие требованиям санитарно – эпидемиологического управления Минздрава Республики Узбекистан для применения в практике хозяйственно – питьевого водоснабжения.

После введения в строй данного объекта необходимо обеспечения надлежащего и эффективного использования водных ресурсов и предотвращение потерь и утечек воды и чрезмерного водопотребления - установка, эксплуатация и периодическая проверка водомеров у водопользователей.

Ввиду вышеизложенного разумно предположить что, соблюдая все заложенные экологические мероприятия строительство данного объекта не окажет негативного воздействия на природную среду и здоровье населения.

Из вышеуказанного Джизакское областное управление по экологии и охране окружающей среды СОГЛАСОВЫВАЕТ проект заявления о воздействии на окружающую среду (ЗВОС) строительство систем водоснабжения для обеспечения питьевой водой населения на территории ССГ «Пшагар» Зааминском районе Джизакской области, как удовлетворяющий требованиям законодательства.

В соответствии со ст.22 Закона Республики Узбекистан «Об экологической экспертизе» данное заключение Государственной экологической экспертизы имеет юридическую силу в течение трех лет со дня его выдачи. В соответствии приложением № 2 к ПКМ 541 от 07.09.2020 г. при изменении вида деятельности или проектных решений, не указанного настоящим заключением Госэкоэкспертизы, данное заключение теряет свою силу, и заказчиком необходимо получить соответствующее заключение ГЭЭ в надлежащем порядке.

Заключение государственной экологической экспертизы о допустимости реализации проекта не подменяет и не отменяет необходимость получения соответствующих разрешительных документов в установленном законодательном порядке.

Заказчику необходимо выполнить все природоохранные мероприятия, изложенные в проекте ЗВОС и в данном заключении Госэкоэкспертизы, оформить в надлежащем порядке с ГУП «Тоза худуд» соответствующие договора на вывоз отходов в специальные места, а также осуществлять комплекс мероприятий по охране земель, предусмотренный Земельного Кодекса Республики Узбекистан.

Вырубку деревьев и кустарников согласовать с Управлением по экологии и охране окружающей среды Джизакской области, согласно Постановлением Кабинета Министров Республики Узбекистан за №255 от 31.03.2018 года «Об утверждении некоторых административных регламентов оказания государственных услуг в сфере природопользования».

Инспекцию по контролю в сфере экологии и охране окружающей среды Зааминского района, необходимо осуществлять контроль выполнения предложенных природоохранных мероприятий и требований.

М.П. Начальник управления

Э.Холматов.

Исп: З.Агламов

Тел (78) 771-69-49

Xulosa raqami 358-Э

Xulosa sanasi 08.10.2021

Tekshirish uchun

# Rural Infrastructure Development Project



Annex 2: Sub-Project Environmental Screening Document

I-SHAKL

Benefitsiar tomonidan to'ldiriladigan makdosh hamkorlar, qishloq fasilitatorlari, qishloq muhandislari yordamida mahalla rivojlanish guruxi a'zolari tomonidan bajariladi

Sana: "18" noyabr 2021yil

Manzil: Peshog'or MFY Zomin tuman Jizzax viloyat

1. Loyiha nomi: Qishloq infratuzilmasini rivojlantirish loyihasi

2. Loyihaning qisqacha tavsifi quyidagilarni o'z ichiga oladi:

- loyiha mohiyati – "Peshog'or" MFYni ichimlik suv bilan ta'minlash
- qiymati – 235 ming. AQSH dollar
- jismoniy xajmi – 300 xonadon
- maydoni – 5,136 km
- joylashgan joyi – Jizzax viloyat Zomin tumani Peshog'or MFY
- mulkka egalik qilish – Jizzax viloyat "Suvta'minot" MCHJ Zomin tumani filiali
- olib boriladigan ishlar
- davomiyligi – 1 yil (12 oy)
- kengaytirish yoki yangi
- qurish rejalari – 5,136 km suv tarmog'i tortish, 2 dona Yangi chuqur suv quduqlarini qazishni o'z ichiga oladimi? 25 m<sup>3</sup> hajmdagi 3 dona suv minorasi o'rnatish, quduqlarga sanitar himoya zonalarini qurish, TP o'rnatish, elektromontaj ishlari, bio-bak uskunasi o'rnatish.

3. Qurilish yoki ekspluatatsiya bosqichlarida loyiha quyida keltirilgan atrof-muhit parametrlariga ta'sir ko'rsatadimi? Qaysi davrlarda ta'sir qilishi va engillashtiruvchi choralarini ko'rish zarurligini ko'rib chiqib to'ldiring.

Atrof- muhitga daxildir komponentlar	Qurilish bosqichi	Foydalanish bosqichi	Engillashtirish choralari
<b>Yer osti muhiti va chiqindi</b>			
Yer va tuproqning tanazzulga uchrashi: loyiha yer qazishni o'z ichiga oladimi?	Ha	-	• texnikalarni ishlash jarayonida yerni unumdor qatlamiga zarar etkazmaslik choralarini ko'rish
Qattiq, shu jumladan toksik chiqindilar hosil bo'ladimi?	Ha	Qattiq va maishiy chiqindilar	• barcha turdagi chiqindilarini vaqtinchalik saqlash uchun belgilangan talablarga asosan maxsus joy ajratish; • Hosil bo'lgan chiqindilarni o'z vaqtida utilitatsiya qilish choralarini ko'rish
Tuproq va yer osti suvlarining ifloslanishi	Ha	yo'q	• Qurilishda soz texnikalardan foydalanish
<b>Atmosfera xavosi</b>			
Loyiha davomida atrof-muhitga ifloslantiruvchi chiqindilar tashlanadimi?	Xa	yo'q	• qurilish hududida changlarni ko'tarilishini oldini olish maqsadida suv sepih bostirish
<b>Suv</b>			
Suv miqdori: loyiha davomida suvdan foydalaniladimi?	yo'q	ha	• Suvdan foydalanish limitlariga rioya qilish va maqsadli sarflash
Suv sifati/ifloslanish: loyiha yer usti suvlarining ifloslanishiga ta'sir qiladimi?	yo'q	yo'q	
<b>O'simlik dunyosi</b>			
Loyiha davomida o'simlik dunyosiga ta'siri?	yo'q	yo'q	• Daraxt va butalarni kesilishiga yo'l qo'ymaslik • Qurilishga xalaqit qilayotgan daraxt va butalarni ko'chirish choralarini ko'rish.
<b>Ijtimoiy-iqtisodiy muhit</b>			
Loyiha inson salomatligining yomonlashishiga, mehnat xavfsizligi va loyiha hududi yaqinida yashovchi aholining bezovtalanmasligini ta'minlay oladimi?	Ha	yo'q	• majburiy mehnat va bolalar mehnatidan foydalanmaslik; • mehnat havfsizlik qoidalariga to'liq rioya qilish;
Mazkur loyiha mahalliy aholining atrof-muhit bo'yicha muomo va mulohazalarini inobatga olish uchun jamoaviy maslahatlarni talab etadimi?	Ha	yo'q	• loyihaning skrining ishlari to'liq bitgandan keyin aholiga jamoaviy maslahatlashuvni talab etadi
Ijtimoiy ta'sirlar	Ha	yo'q	• Loyiha hududiga havfsizlikni ta'minlash maqsadida maxsus belgilar o'rnatish; • majburiy mehnat va bolalar mehnatidan foydalanmaslik

Imzolandi:

Mahalla taraqqiyot guruhi a'zolari

Qishloq fasilitator/ muhandis

*[Signature]*  
F.I.S.H.

*[Signature]*  
imzo

# Rural Infrastructure Development Project

## 2-SHAKL

(viloyat AMIH mutaxassisi tomonidan ekologik skrining cheklist natijalari asosida to'ldiril)

Sana: «19» noyabr 2021 yil

Manzil: Peshog'or MFY Zomin tuman Jizzax viloyat

1. Loyiha nomi: Ichimlik suv bilan ta'minlash

2. JB talabi va O'z.Res qonunchiligiga asosan sub-loyihaning ekologik toifasini belgilang:

Jaxon Banki – "A" "B" "C" O'zbekiston Respublikasi qonunchiligi – "1" "2" "3" "4"

(agar loyiha "A" yoki "1" toifaga mansub bo'lsa, keyingi bo'limlarni to'ldirishni kerek emas, bunday sub-loyihalarni loyihaga kiritish mumkin emas va moliyalashtirilmaydi)

3. Loyihaviy tadbirlar quyidagi tarzda amalga oshiriladi:

- Nozik va qiymati yuqori ekotizimlarda - botqoq yerlarda, yovvoyi yerlarda va yo'qolib ketish xavfi ostida turgan turlarning yashash joylarida -yo'q(ha yoki yo'q)
- arxeologik va / yoki tarixiy joylar yoki mavjud madaniy va ijtimoiy muassasalar joylashgan joylarda yoki uning yonida; yo'q(ha yoki yo'q)
- ko'chirish talab etiladigan yoki ifloslanishning potensial ta'siri va boshqa buzilishlar jamoalarga jiddiy ta'sir ko'rsatishi mumkin bo'lgan zich joylashgan joylarda; -yo'q(ha yoki yo'q)
- Katta qurilish faoliyatlari bor bo'lgan hududlarda yoki tabiiy resurslarni taqsimlashda ziddiyatlar mavjud bo'lgan joylarda; suv oqimlari bo'ylab, suvli suv zaryadlanadigan joylarda yoki ichimlik suvi uchun ishlatiladigan suv omborlarida; va qimmatbaho resurslarga ega bo'lgan erlarda yoki suvlarda (baliqchilik, minerallar, dorivor o'simliklar, qishloq xo'jaligining yaxshi tuproqlari) - yo'q(ha yoki yo'q)

Agar «ha» bo'lsa, subloyiha Dasturdan chiqariladi

4. Ekologik baholash (EB) talab etiladimi? (ha yoki yo'q) -ha

5. Talab qilinadigan EB hujjatlarining turlari (keraklisini belgilang):

- Atrof-muhit va Ijtimoiy Ta'sirni Baholash(AMITB) va Atrof-muhit va Ijtimoiy Boshqaruv Rejasi (AMIBR);
- "B" toifadagi subloyihalar uchun AMIBR;
- Atrof-muhit Boshqaruv Rejasi (AMBR) cheklist (kichik hajmdagi qurilish / qayta ta'mirlash sub-loyihalari uchun);
- AMIBR cheklist (kichik miqyosdagi yo'llarni qayta ta'mirlash loyihalari uchun);
- Atrof-muhit (ekologik) skiring cheklist
- Atrof-muhitga ta'sir ko'rsatish to'g'risidagi ariza loyihasi (2-4 sub-loyihalari uchun)
- Atrof-muhitning oqibatlari to'g'risidagi bayonot (faqat 2-3-toifalar uchun sub-loyihalari uchun)

6. Sub-loyiha qanday ekologik va ijtimoiy muammolarni ko'taradi?

Chiqindilarning hosil bo'lishi (qurilish chiqindilari), havoning erissiyasi (ichimlik suv bilan ta'minlashda noorqanik changlar hosil bo'lishi), qurilish ishlari paytida shovqin kabi muammolar kelib chiqadi.

7. Agar EB zarur bo'lsa, qanday muammolar hal qilinishi kerak?

Rejalashtirilgan ishlar hududlarida tuproq va o'simlik qatlamini, daraxt va buta o'simliklarini saqlashga qaratilgan tabiatni muhofaza qilish bo'yicha tayyorgarlik tadbirlari, Chiqindilarni vaqtincha saqlash uchun maxsus joy ajratish va, qurilishdan hosil bo'ladigan chiqindilarni Toza hudud DUK bilan shartnoma asosida markaziy chiqindixonaga olib chiqish hamda belgilangan tartibda utilitatsiya qilish, Qurilish ishlarida changni bosish uchun suv sepish, Yaqin atrofdagi turar-joy binolari hududida shovqin darajasi kun davomida 55 dB dan, tunda esa 45 dB dan oshmaslik choralarini ko'rish.)

8. EB ni o'tkazish muddati va taxminiy narxi qancha? 1 oy, taxminiy narxi 3 mln.dan-10 mln.gacha

Xulosa (sub-loyihani dasturga kiritish mumkin va agar "Ha" bo'lsa, qanday sharoitlarda):

**Jahon banki talablari va O'zbekiston Respublikasi Tabiatni muhofaza qilish to'g'risidagi qonuni, qarorlariga, Davlat ekologik ekspertizasining ijobiy xulosasida ko'rsatilgan talablarga asoslangan holda**

Atrof-muhitni ijtimoiy himoya qilish  
mutaxassisi



E.Qorayev

**Annex 3: Consultations materials**

**MINUTES OF THE PUBLIC DISCUSSION**

**Meetings under the project "Rural Infrastructure Development" on the sub-project "Construction of water supply systems to provide drinking water to population" on the territory of RCA "Pshgar" and RCA "Navoiy" of Zamin district of Jizzak region .**

**Venue: School 5, RCA Pshagar, Jizzakh region.**

**Date and time: February 19, 2022, 10.00-11.30 pm.**

**Goals:**

- Inform the population of the project area about the project, about the start of work on the subproject;
- Provide information to the public on environmental and social measures;
- Explain the complaints procedure;
- Discuss the current situation, the wishes and concerns of the population regarding the construction of water wells, water towers and water pipelines;

**Members:** The population of the inhabited RCA "Pshgar" and RCA "Navoiy" - the total number of those present at the meeting was 40 participants, of which 38 were men and 2 were women. most of those present (80%) of those present are the chairmen of mahalla committees (Annex 1)

The public hearing was conducted by: I. Ruziev, environmental specialist of the Rural Infrastructure Development project, sociologist - Azimova D.R., ecologist - Usmanova Sh.

**Topics discussed:**

- Social Policy of Uzbekistan and the World Bank on Rural Development and Social and Environmental Consequences.
- about the project and its components;
- information about the start of work and the locations of installations of wells and water intakes and the laying of an underground pipeline;
- the issue of compensation for resettlement;
- GRM.

**Following the presentation, the hearing participants raised the following questions:**

No.	Question	Answer
1	Is it possible to start construction as soon as possible?	Construction will start after the necessary procedures in the paperwork are completed. We are trying to speed up the process.
2	How long will the work take?	All the works will be carried out within a year.
3.	How many water towers will be built?	There will be Water towers – 3 and Water wells - 2.
4	You will install water pipes, who will bring them to our homes?	This issue will be resolved at the mahalla level. Since the project does not provide for piping
5	How will the issue with payment for water be solved?	payment for water will be made according to the tariff plans established by the state.
6.	Who will bring water pipes to households?	After the transfer of wells to the balance of Suvtaminot. Suvtaminot will connect households and install meters. And households will pay for water according to the established tariffs.

## Rural Infrastructure Development Project

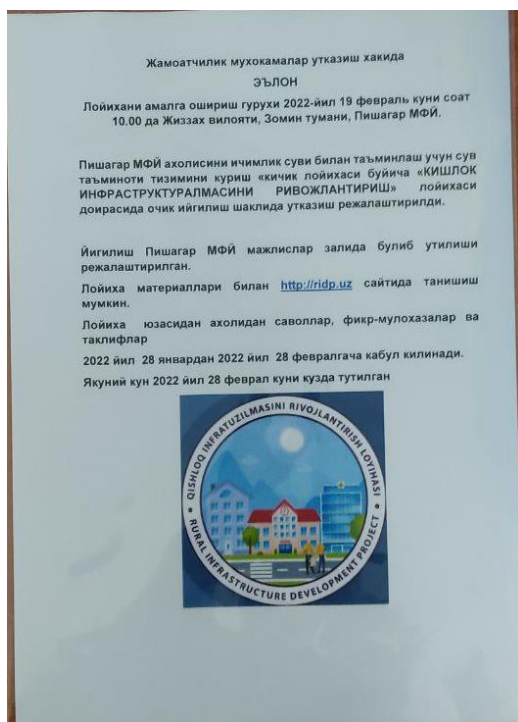
*Suggestions: hold on-site meetings with residents prior to the commencement of construction works, post the construction schedule around the streets and banners with information about the project (project passport) and phone numbers*

### Annexes

#### Location of the meeting place



## Announcements



#### Announcement of public discussions

The project team reported that on February 19, 2022, 10.00-11.30 pm. at the address of the Jizzakh region, Zaamin district, mahalla " Navoiyl", mahalla " Pshagar" ublic hearings in the form of open meetings within the framework of the project "DEVELOPMENT of RURAL INFRASTRUCTURE" for the sub-project "Construction of water supply systems to provide drinking water to the population" in the Bakhmal district of Jizzakh region.

The project materials can be found on the website: <http://ridp.uz>

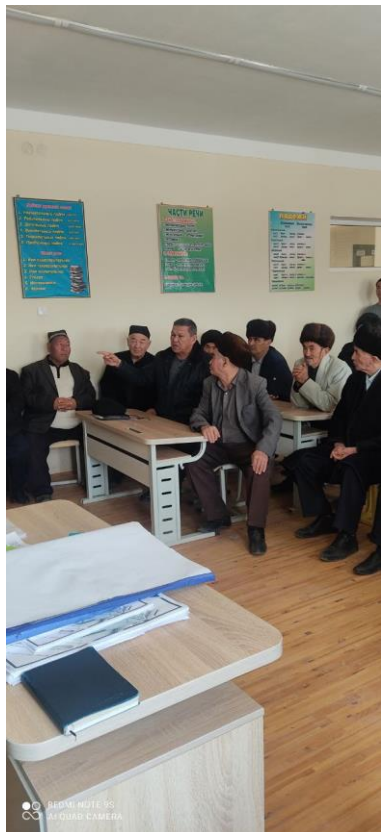
Questions, comments and suggestions from the public on the

project are accepted from January 28, 2022 to February 28, 2022. The cut-off day is February 28, 2022

Subproject: Construction of Water Supply in Pshagar Rural Citizens' Assemblies of Zomin district of Jizzak region

# Rural Infrastructure Development Project

## Photo



Subproject: Construction of Water Supply in Pshagar Rural Citizens' Assemblies of Zomin district of Jizzak region

# Rural Infrastructure Development Project



Subproject: Construction of Water Supply in Pshagar Rural Citizens' Assemblies of Zomin district of Jizzak region

Rural Infrastructure Development Project

Participant list

ОБЩЕСТВЕННЫЕ КОНСУЛЬТАЦИИ

Зомин область

Зомин район Пшазар, Навоий КР

19.02.2022 дата

№	ФИО	Номер телефона	Махала/фермер	подпись
1	Алимов Д.Уали	93 822 5457	Коракчи	Алимов
2	Алимов В.Вардан	94 572 6255	сеи и сеи	Алимов
3	Алимов Шамур	94 574 5419	Коракчи	Алимов
4	Алимов Зоробек	99 559 1957	Бон Пшазар	Алимов
5	Алимов И.	94 370 3644	Коракчи	Алимов
6	Алимов У.	93 296 7389	Коракчи	Алимов
7	Алимов О.	94 194 0005	Коракчи	Алимов
8	Алимов И.	94 579 8884	Коракчи	Алимов
9	Алимов М.	94 634 0635	Коракчи	Алимов
10	Алимов И.	93 204 9916	Коракчи	Алимов
11	Алимов З.	93 799 0319	Коракчи	Алимов
12	Алимов Ш.	93 290 1076	Коракчи	Алимов
13	Алимов И.	-	Коракчи	Алимов
14	Алимов К.	94 340 8321	Коракчи	Алимов
15	Алимов Б.	99 585 69 03	Коракчи	Алимов
16	Алимов Х.	93 296 6559	Коракчи	Алимов
17	Алимов О.	94 196 8281	Коракчи	Алимов
18	Алимов Д.	94 345 9339	Коракчи	Алимов
19	Алимов И.	99 893 305 107	Коракчи	Алимов
20				

ОБЩЕСТВЕННЫЕ КОНСУЛЬТАЦИИ

Зомин область

Зомин район Пшазар, Навоий КР

19.02.2022 дата

№	ФИО	Номер телефона	Махала/фермер	подпись
1	Алимов О.	93 87 84 53	Коракчи	Алимов
2	Алимов Сапар	97 524 0954	Коракчи	Алимов
3	Алимов И.	-	Коракчи	Алимов
4	Алимов И.	-	Коракчи	Алимов
5	Алимов И.	-	Коракчи	Алимов
6	Алимов И.	-	Коракчи	Алимов
7	Алимов Сапар	94 196 0363	Коракчи	Алимов
8	Алимов И.	94 341 73 15	Коракчи	Алимов
9	Алимов Сапар	93 200 0448	Коракчи	Алимов
10	Алимов Сапар	93 301 15 64	Коракчи	Алимов
11				
12				
13				

ОБЩЕСТВЕННЫЕ КОНСУЛЬТАЦИИ

Зомин область

Зомин район Пшазар, Навоий КР

19.02.2022 дата

№	ФИО	Номер телефона	Махала/фермер	подпись
1	Алимов Р.И.	93 297 70 07	Коракчи	Алимов
2	Алимов И.	94 192 57 12	Коракчи	Алимов
3	Алимов С.	93 777 65 68	Коракчи	Алимов
4	Алимов Р.А.	-	Коракчи	Алимов
5	Алимов С.	93 299 06 11	Коракчи	Алимов
6	Алимов С.	93 292 26 81	Коракчи	Алимов
7	Алимов И.	93 290 92 82	Коракчи	Алимов
8	Алимов И.	94 342 56 70	Коракчи	Алимов
9	Алимов И.	94 192 91 35	Коракчи	Алимов
10	Алимов И.	93 302 13 76	Коракчи	Алимов
11	Алимов С.Р.	94 340 06 48	Коракчи	Алимов
12				
13				

## Appendix 4.Chance Finds Procedure

### Purpose

Construction sites could be considered as subject to heritage survey and assessment at the planning stage. These surveys are based on surface indications alone, and it is therefore possible that sites or items of heritage significance will be found in the course of development work. The procedure set out here covers the reporting and management of such finds.

**Scope:** The “chance finds” procedure covers the actions to be taken from the discovery of a heritage site or item to its investigation and assessment by a trained archaeologist or other appropriately qualified person.

**Compliance:** The “chance finds” procedure is intended to ensure compliance with relevant provisions of the Law of RUz “On protection and Use of Objective of the Archeological Heritage” (2009). The procedure of reporting set out below must be observed so that heritage remains reported to the Ministry of Archeology are correctly identified in the field.

### Responsibility

**Operators/Workers** - To exercise due caution if archaeological remains are found

**Foreman/construction site manager** - To secure site and advise management timeously

**Contractor’s manager** - To determine safe working boundary and request inspection

**Archaeologist:** To inspect, identify, advise management, and recover remains

### Procedure

MITIGATION/MONITORING ACTION	RESPONSIBILITY	SCHEDULE
Should a heritage site or archaeological site be uncovered or discovered during the construction phase of the project, the “change find” procedure should be applied. The details of this procedure are highlighted below:	Person identifying archaeological or heritage material	When necessary.
<ul style="list-style-type: none"> <li>• If operating machinery or equipment: stop work</li> <li>• Identify the site with flag tape</li> <li>• Determine GPS position if possible</li> <li>• Cease any works in immediate vicinity</li> </ul>	Person identifying archaeological or heritage material	
<ul style="list-style-type: none"> <li>• Report findings to foreman</li> </ul>	Foreman/construction site manager	

Rural Infrastructure Development Project

<ul style="list-style-type: none"> <li>• Report findings, site location and actions taken to superintendent</li> </ul>		
<ul style="list-style-type: none"> <li>• Visit site and determine whether work can proceed without damage to findings</li> <li>• Determine and mark exclusion boundary</li> <li>• Site location and details to be added to project GIS for field confirmation by archaeologist</li> </ul>	Contractor's manager	
<ul style="list-style-type: none"> <li>• Inspect site and confirm addition to project GIS</li> <li>• Advise the Ministry of Culture (MoC) and request written permission to remove findings from work area</li> <li>• Recovery, packaging and labelling of findings for transfer to National Museum</li> </ul>	Archaeologist	
<ul style="list-style-type: none"> <li>• Should human remains be found, the following actions will be required:             <ul style="list-style-type: none"> <li>○ Apply the change find procedure as described above.</li> <li>○ Schedule a field inspection with an archaeologist to confirm that remains are human.</li> <li>○ Advise and liaise with the (MoC)and Police</li> <li>○ Remains will be recovered and removed either to the National Museum or the National Forensic Laboratory.</li> </ul> </li> </ul>	<p>Archaeologist</p> <p>Representatives of Khokimiyat and Ministry of Culture</p> <p>Police</p>	

Appendix 5. Hokim's decision



JIZZAX VILOYATI ZOMIN TUMANI HOKIMINING  
**QARORI**

2021 - yil 24 - avgust

76-3-48-Q/21

Zomin tumani hokimligi

**Зомин туманидаги қишлоқ ва маҳалла фуқаролар йиғинидаги аҳоли пунктлари ҳудудда ичимлик суви, электр тармоғи, ички йўллар қуришга рухсат бериш тўғрисида.**

Ўзбекистон Республикаси Президентининг 2020 йил 25 ноябрдаги “Жаҳон банкининг Халқаро тараққиёт уюшмаси ва Осиё инфратузилмавий инвестициялар банки иштирокида “Қишлоқ инфратузилмасини ривожлантириш” лойиҳасини амалга ошириш чора-тадбирлари тўғрисида”ги ПҚ-4898-сонли қарори ижросини таъминлаш, шунингдек Жиззах вилояти ҳокимлиги “Ягона буюртмачи хизмати” инжиниринг компаниясининг 2021 йил 9 августдаги 975-сонли хатини кўриб чиқиб кўриб чиқиб

**Қ А Р О Р Қ И Л А М А Н:**

1. Жиззах вилояти ҳокимлиги “Ягона буюртмачи хизмати” инжиниринг компаниясининг 2021 йил 9 августдаги 975-сонли хати асос учун қабул қилинсин.

2. Зомин туманидаги Қўштол, Навоий, Нурликент, Гулшан, Юксалиш, Тўрттом, Пшағор, Бешкуби, Чорвадор, Дуоба, Туркман, Ғаллақор қишлоқ ва маҳалла фуқаролар йиғини ҳудудларини ичимлик сув, электр тармоғи ва автомобиль йўли қуришга рухсат берилсин.

3. Туман қурилиш бўлими, Давлат хизматлари маркази билан биргаликда белгиланган тартибда тегишли ташкилотлардан техник шартларни тўплаш ҳамда АРТ-1 ва АРТ-2 ҳужжатларини тайёрлаш ишларини белгиланган муддатларда якунласин.

4. Ушбу қарор маълумот учун тегишли ташкилотларга юборилсин.


5. Мазкур қарорнинг бажарилишини назорат қилиш туман ҳокимининг ўринбосари Т.Усмонкулов зиммасига юклатилсин.

Туман ҳокими



А.Абдуганов

Appendix 6. Letter from Hokim Zomin district

  
**O‘ZBEKISTON RESPUBLIKASI JIZZAX VILOYATI**  
**ZOMIN TUMANI HOKIMI**

138800, Zomin sh. Mustaqillik ko'chasi 32; tel: (71)392 12 12; 392 11 59; [zomin.tuz@xat.uz](mailto:zomin.tuz@xat.uz); [web-sayt.zomin.jizzax.uz](http://web-sayt.zomin.jizzax.uz)

2022-yil 18.11.2022 *А. Абдуганиев* -son Zomin sh.

**Ўзбекистон Республикаси Иқтисодий  
таракқиёт ва камбағалликни  
қисқартирishи вазирилик хузуридаги  
“Қишлоқ инфратузилмасини  
ривожлантириш” лойиҳасини  
директори З.Уроқовга**

**Хурматли Зафар Назарқасимович!**

Ўзбекистон Республикаси Президентининг 2020 йил 25 ноябрдаги “Жаҳон банкининг Халқаро тараққиёт уюшмаси ва Осие инфратузилмавий инвестициялар банки иштирокида “Қишлоқ инфратузилмасини ривожлантириш” лойиҳасини амалга ошириш чора-тадбирлари тўғрисида”ги ПҚ-4898-сонли қарори ижросини таъминлаш мақсадида, жорий йилда қурилиши белгиланган

**Туманининг “Қўштол” МФЙ ҳудудидаги**  
Qushtol 1- 39°58'41.8"N 68°06'08.1"E  
Qushtol 2- 39°58'11.4"N 68°05'59.0"E  
Qushtol 3- 39°58'18.9"N 68°05'40.2"E  
Qushtol 3 boshnya urmi- 39.962302, 68.096269,  
**“Нурликент” МФЙ ҳудудидаги**  
Nurlikent 1- 40°04'12.3"N 68°10'41.8"E  
Nurlikent 2- 40°03'50.1"N 68°10'38.3"E  
**“Навоий” ҚФЙ ҳудудидаги**  
Boshpishagar - 39°53'3.25"C 68° 42.63"B  
Boshpishagar -39°53'08.8"N 68°04'06.0"E  
Pshag'ar MFY Xududida suv minorasi va suv qudug'i  
Pshagar- 39°57'52.6"N 68°07'46.6"E

**“Пешагар” МФЙ ҳудудидаги**  
Molguzar kuchasi uchun 1-suv minorasi va suv qudug'i  
39°56'54.71", 68°07'33.84",  
Soy ichi ko'chasi uchun 1-suv minorasi  
39°57'18.06", 68°07'16.92",  
1-suv qudug'i 39°57'27.80", 68°07'18.55".  
Adrobood kuchasi uchun 1-suv minorasi 39°57'42.14", 68°08'25.19".  
**“Гулшан” ҚФЙ ҳудудидаги**  
Gulshan qishlog'i uchun 1-suv minorasi va 1-suv qudug'i  
680 11'32.25"; 400 04'02.60"  
Gulshan qishlog'i uchun 2-suv minorasi va  
2-suv qudug'i 680 11'34.49"; 400 03'35.00"  
Gulshan qishlog'i uchun 3-suv minorasi va 3-suv qudug'i  
680 12'15.96"; 400 03'23.67"  
Baxmat joyi qishlog'i uchun 1 ta suv minorasi va 1 ta suv qudug'I  
680 15'03.68"; 400 00'32.85"  
Izbosar qishlog'i uchun 1 ta suv minorasi va 1 ta suv qudug'I  
680 15'23.40"; 400 00'29.80"  
O'zgarish qishlog'i uchun 1 ta suv minorasi va 1 ta suv qudug'I  
680 15'43.60"; 400 01'22.90"  
**“Дуоба” ҚФЙ ҳудудидаги**  
Sarikamar qishlog'i uchun 1-suv minorasi  
390 49'10.62"C, 68023'58.87"B.  
Boytera qishlog'i 1-suv minorasi 39051'55.43"C, 68022'32.20"B.  
**“Галлакор” ҚФЙ ҳудудидаги**  
Boymoqli qishlog'i uchun 1-suv minorasi 400 4'5.52"C, 68024'57.47B,  
2-suv minorasi 4004'8.18"C 68025'22.05"B.  
Surxonobod qishlog'i 1-suv minorasi 4003'59.87"C, 68028'2.11"B.  
Xulkar qishlog'i 1-suv minorasi Xulkar qishlog'I 1-suv minorasi  
39053'28.19C, 68022'52.14B.  
Chol qishlog'i 1-suv minorasi 39059'51.91"C, 68022'45.87B.  
Ittifoq qishlog'i 1-suv minorasi 4001'29.58"C 68019'51.45B,  
2-suv minorasi 4001'36.52"C, 68020'7.60"B.  
Qiziloy qishlog'i 1-suv minorasi 4001'45.59"C, 68021'22.48B,  
2-suv minorasi 4001'58.15"C, 68021'28.68"B.  
Quyonoqli qishlog'i 1-suv minorasi 4003'14.39"C, 68027'39.70"B.  
Birlashgan qishlog'i 1-suv minorasi 39°58'34.82"C, 68°22'39.56"B

**“Бешкуби” ҚФЙ ҳудудидаги**  
Axtaxona 39048'53.05"C, 68017'51.58"B,  
Uvol 39048'27.10"C, 68015'36.39"B,  
Qogomozor 39048'54.45"C, 68011'38.12"B,  
**“Юксалини” МФЙ ҳудудидаги**  
68013'55.94"B  
39055'53.46"C  
**“Туркман” МФЙ ҳудудидаги**  
39090'85.19", 68049'13.16"  
(39.908519, 68.491316)  
**“Чорвадор” ҚФЙ ҳудудидаги**  
39088'85.30", 68059'83.94"  
(39.888530, 68.598394)  
39091'60.64", 68057'88.10"  
(39.916064, 68.578810)  
39095'44.47", 68064'91.89"  
(39.954447, 68.649189)  
39096'43.69", 68061'53.54"  
(39.964369, 68.615354)  
**“Тўрттом” МФЙ ҳудудидаги**  
To'rttom qishlog'i 40007'83.70", 68035'39.13",  
СНо'quvar qishlog'i 40005'67.09", 68034'18.04",  
Pastki sirg'ali qishlog'i 40006'67.66", 68038'37.53",  
координаталаридаги мавжуд ер майдонлари туман ер захирасида  
эканлигини маълум қиламан.

Хурмати билан,



А.Абдуганиев