WASTE MANAGEMENT PLAN (WMP) FOR MYKOLAIV WATER SUPPLY SUBPROJECT – 2_MYK_501

TECHNICAL ASSISTANCE FOR UKRAINE MUNICIPAL INFRASTRUCTURE PROGRAMME PREPARATION AND IMPLEMENTATION (FUNDED BY NIP) AA-010067-001

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Author(s)	Olha Syzonenko
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RECIPIENTS

Name	Entity
Aleksandr BAKHTAMYAN	EIB
Marco BEROS	EIB
Pavlo NOVAK	EIB
Olha FEDEVYCH	PMSU
Dr. Petra SEIDLER	TA to PMSU (COWI)
Olha KOVBLIUK-PUSTOVIT	TA to PMSU (COWI)

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LIST OF ABBREVIATIONS

CIS	Commonwealth of Independent States
CMU	Cabinet of Ministers of Ukraine
DEP	Design & estimate package
DSTU	State Standard of Ukraine
EHS	Environment, Health and Safety
EIB	European Investment Bank
EOHPP	Environmental, Occupational and Health Protection Plan
EU	European Union
F&L	Fuel and lubricants
MC "Mykolaivvodokanal"	Municipal Company "Mykolaivvodokanal"
MSW	Municipal solid waste
NC	National Classification
NCW	National Classification of Waste
NLW	National List of Waste
PIU	Project Implementation Unit
WMP	Waste Management Plan
WTP	Water treatment plant

Key definitions (2008/98/EC)

Waste	any substance or object which the holder discards or intends or is required to discard;
Waste management	collection, transport, recovery and disposal of waste, including the supervision of such operations and the after-care of disposal sites;
Hazardous waste	waste which has physical, chemical or biological characteristics which display one or more of the hazardous properties listed in the Annex III;
Waste collection	gathering of waste, including the preliminary sorting and preliminary storage of waste for the purposes of transport to a waste treatment facility;
Separate waste collection	collection where a waste stream is kept separately by type and nature so as to facilitate further processing;
Waste recycling	mechanical, physicochemical or biological processing to prepare waste for recovery or disposal;
Preparing for re-use	checking, cleaning or repairing recovery operations, by which products or components of products that have become waste are prepared so that they can be re-used without any other pre-processing;
Waste recycling	any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. It includes the reprocessing of organic material but does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations;
Waste disposal	any operation (including landfilling and incineration) which is not recovery even where the operation has as a secondary consequence the reclamation of substances or energy.

1. Purpose of the Waste Management Plan

The Waste Management Plan has been developed to define the approach to waste management of the Municipal Company "Mykolaivvodokanal" in accordance with the current state legislation and international standards, including EIB environmental and social standards.

The objectives of this plan are:

- to reduce the risks of harmful effects on human health and environment by implementing waste management practices based on the principles of the waste hierarchy and best international practices;
- to optimize opportunities in order to prevent waste generation and to reduce its quantity;
- to increase the amount of waste that can be reused, recycled and recovered, to reduce the amount of waste disposed of in landfills and to improve resource efficiency.

The current WMP identifies the main state and international standards for waste control and disposal, allocates roles and responsibilities and includes waste collection, separate collection and storage, reuse/recycling options and waste transfer to specialized companies.

1.1 General Information about the Project

The overall goal of the Preliminary Tender Documentation "Mykolaiv Water Supply Subproject – 2_MYK_501 (version 03 of 18 February 2025)" is to implement the most reasonable, sustainable and reliable solution for the supply of drinking water to the city of Mykolaiv.

The planned activities subject to environmental impact assessment is the reconstruction of water treatment plant (WTP) in the city of Mykolaiv.

Design stage: Preliminary design (concept of the future facility) for obtaining financing from International Financial Organizations. The preliminary design was prepared in order to provide indicative design solutions and preliminary cost estimates for the proposed investment, namely the reconstruction of the existing treatment facilities by implementing a new technological scheme.

The preliminary design was prepared under martial law.

The planned activities, in accordance with the clause 10 (construction of dams and installation of other equipment for retaining or accumulating water for long periods of time) and the clause 13 (economic activities leading to the discharge of pollutants into water bodies) of the part 3 of the article 3 of the Law of Ukraine "On Environmental Impact Assessment" No. 2059-VIII of 23 May 2017 [1], belong to the second category of activities and facilities that may have a significant impact on the environment and are subject to environmental impact assessment. The planned activities will be financed by attracting foreign loans under state guarantees.

To ensure uninterrupted and reliable water supply to the city of Mykolaiv, the planned reconstruction project of the WTP involves purifying water from five possible surface water sources:

- Water supply from the Dnipro River (water intake in Kherson);
- Water supply from the Southern Buh River in Nova Odesa area;
- Water supply from the Zhovtneve (Vitovske) Reservoir;

- Water supply from the Snihurivka Irrigation Canal (Inhulets River);
- Water supply from the Buh estuary spring (for emergency short-term use).

Although the desired future scenario is to supply the water for the city from the Dnipro and/or Southern Buh Rivers through the Zhovtneve (Vitovske) Reservoir, currently the only available water sources are the Inhulets River as the main source and the Buh estuary as the emergency short-term water supply source. Water from both sources requires purification for microbiological parameters, as well as for turbidity, colour, organic matter content and requires desalination. While water from Inhulets has a salinity of up to 3,500 mg/dm^3, water from the Buh estuary has a total soluble solids content of up to 12,000 mg/dm^3. For this purpose, it is planned to reconstruct the existing WTP facilities.

The water treatment plant (WTP) must be designed to ensure the quality of drinking water in accordance with the Ukrainian standard DSanPiN 2.2.4-171-10 "Hygienic requirements for drinking water intended for human consumption" [2] and the EU Directive 2020/2184 on the quality of water intended for human consumption [3].

Reconstruction of the existing water treatment plant (WTP) facilities with the arrangement of a new technological scheme involves an additional desalination stage to reduce the total dissolved solids content.

The WTP will be designed to operate in two main and one emergency modes:

- Operation mode "A" is intended for water treatment of the Dnipro River, the Southern Buh River and the Zhovtneve (Vitovske) Reservoir. The water treatment process is carried out without a desalination stage.
- Operating mode "B" is intended for water treatment from the Snihurivka Irrigation Canal (Inhulets River) and includes an additional desalination stage to reduce the total dissolved solids content.
- Operating mode "C" allows for emergency short-term water treatment from the Buh estuary.

The design capacity of the new plant corresponds to the forecast of water demand in the city of Mykolaiv until 2033, which was carried out within the framework of the feasibility study approved by the Final Beneficiary and the Client.

Since the city of Mykolaiv has not been provided with drinking water of standard quality for the past two years, the Beneficiary instructed TA SP to design the plant with several stages of implementation to ensure the commissioning of the first stage to meet the city's current water needs as soon as possible:

- **Commissioning stage 1:** The WTP facilities are designed to meet the city's current need for 90,000 m^3 of purified water per day;
- **Commissioning stage 2:** The WTP facilities are supplemented with technical equipment to meet the city's full projected demand of 160,000 m^3 per day.

Expected impact from implementation:

For "MVK": improvement of technical and economic indicators due to modernization of equipment; increasing the reliability of the water supply system operation; reduction of operating costs; reduction of budget expenditures; remote control.

For consumer: improving the quality of services provided to the population; improving the state of the environment in the city and region by reducing the negative impact on it.

2. Legislative Framework

2.1 State Environmental Legislation

To date, changes have been made to the waste management legislation in Ukraine in line with the commitments undertaken under the Association Agreement between Ukraine and the EU.

- ✓ Ukrainian National Waste Management Strategy until 2030.

The main guiding document in the field of waste management is the "Ukrainian National Waste Management Strategy until 2030" approved by the Cabinet of Ministers of Ukraine on 08 November 2017, as amended by the Resolution of the Cabinet of Ministers of Ukraine No. 625-p of 25 June 2025.

The strategy is based on the following principles, which are also applied at the project level:

- application of the waste hierarchy, which provides measures for waste management in the most beneficial order;
- transition to a circular economy, in which the value of products, materials and resources is maintained in the economy for as long as possible, minimizing waste generation, while reusing materials and recycling them as much as possible;
- the principle of spatial proximity implies the disposal of waste as close as possible to the place of its generation;
- the principle of prevention implies the use of preventive measures in case of environmental risks;
- shared responsibility – involving state authorities, local self-government bodies, business entities and the public in decision-making to achieve environmental policy goals;
- extended producer responsibility, which implies the responsibility of producers and importers of goods for accepting returned products and waste remaining after their use;
- the "polluter pays" principle, which stipulates that those responsible for pollution should bear the costs associated with such pollution.

The list of regulatory acts that the project must comply with includes:

- ✓ Law of Ukraine "On Waste Management" of 20 June 2022, as amended on 15 November 2024

This Law defines the legal, organizational, and economic principles of activities to prevent the generation of waste, to reduce the volume of waste generation, to reduce the negative consequences of waste management activities, to promote the preparation of waste for reuse, recycling, and recovery in order to prevent their negative impact on human health and environment.

- ✓ DSTU 4462.3.01:2006. Environment protection. Waste management. Procedure for carrying out operations.
- ✓ DSTU 4462.3.02:2006. Environment protection. Waste management. Requirements to packaging, labelling, and disposal of waste. Rules for waste transportation. General technical and organizational requirements.

The standards define the requirements for each stage of the waste management process from the moment of its generation to the conduct of operations, collection, storage, transportation, processing, and disposal.

- ✓ The procedure for creating and administering the waste management information system, approved by the Resolution of the Cabinet of Ministers of Ukraine No. 1279 of 05 December 2023.

This Procedure was developed in accordance with the clause 11 of the part one of the Article 19 and the part

four of the Article 46 of the Law of Ukraine "On Waste Management" and determines the procedure for creating, ensuring the administration and functioning of the waste management information system, which is maintained in the form of an electronic database in order to ensure proper accounting, reporting, generalization and analysis of information in the field of waste management, the provision of electronic public services, maintaining and posting registers and ensuring information interaction between entities in the field of waste management.

- ✓ Resolution of the Cabinet of Ministers of Ukraine No. 556 of 7 May 2022, titled "Certain Issues Regarding the Submission of the Waste Declaration".

This Resolution includes the "Procedure for Submitting a Waste Declaration" and the "Form of a Waste Declaration". This Resolution is adopted in accordance with the clause 12 of the part one of the Article 19 of the Law of Ukraine "On Waste Management" and determines the procedure for submitting a waste declaration.

The declaration is submitted by generators or owners of waste whose activities lead to the generation of hazardous waste, or by owners of non-hazardous waste, the annual volume of which exceeds 50 tons.

- ✓ The procedure for classifying waste and the National List of Waste (NLW) approved by the Resolution of the Cabinet of Ministers of Ukraine No. 1102 of 20 October 2023.

This Procedure was developed in accordance with the part three of the Article 7 and the clause 2 of the part one of the Article 19 of the Law of Ukraine "On Waste Management" and determines the procedure for classifying waste by types and properties in order to properly manage waste, to prevent their negative impact on human health and environment or to reduce such impact.

- ✓ National Classification of Waste NC 005-96, as amended on 01 May 2008.
- ✓ DSTU 2195-99. Nature protection. Waste management. Technical passport of waste. Composition, content, presentation and rules for making amendments (GOST 17.9.0.2-99).

2.2 International Requirements (EIB)

The objectives of this standard are:

- to prevent deterioration of human health or environment and loss of biodiversity by reducing and, where possible, compensation/remediation of significant negative impacts of projects, supported by the EIB;
- to support the EU's goals for reducing greenhouse gas emissions and improving resource efficiency, which will ease pressure on the environment and increase competitiveness through cost savings from efficiency gains, commercialisation of innovation and better management of resources throughout the life cycle;
- to promote the application of an integrated approach to the prevention and control of emissions into air, water, soil; waste management; energy efficiency and accident prevention to protect the environment as a whole, and thus to avoid the transfer of pollutants from one environment to another.

The standard proposes to apply the waste hierarchy in all operations in which the organizer must prevent waste generation and reduce its hazards, meet the requirements specified for separate waste types, ensuring high quality reuse, recycling, recovery and achieving the goal of using recycled waste as a primary, reliable source of raw materials.

The use of waste in energy production technology should be a priority over energy recovery, which is limited by non-recyclable materials.

In cases where waste cannot be recycled or reused, environmentally friendly methods of processing, destruction and final disposal should be promoted.

The amount of hazardous waste should be reduced and, and where this is not possible, waste should be managed in a way that reduces the negative impact on human health and environment, while adhering to a strict control regime in accordance with EU standards and relevant international agreements. This includes obligations for labelling, record-keeping, monitoring and control. Appropriate market alternatives for the environmentally friendly disposal of hazardous waste should be identified, taking into account the restrictions applicable to their transboundary movement.

In cases of disposal of waste and hazardous waste by third parties, it is necessary to ensure that contractors with the necessary licenses are involved in accordance with the requirements of EU legislation/national waste management.

Regular reporting on the amount of waste generated and its removal from facilities should be ensured, as required by EU legislation and international agreements.

- ✓ Directive 2008/98/EC of the European Parliament and of the Council on waste (Waste Framework Directive).

The Waste Framework Directive establishes the legal framework for waste management in the European Union. The Directive defines some basic principles of waste management, including means of handling waste to prevent negative impacts on human health and environment, in particular avoiding environmental risks to water, air, soil, and biodiversity.

The Waste Framework Directive introduces the principle of the waste hierarchy in waste management (already described earlier in this section), the "polluter pays" principle and the "extended producer responsibility" principle.

3. Appointment of Responsible Persons

The first step in waste management planning is to appoint responsible persons with clearly defined functions and responsibilities in the field of waste management at all stages of the project: dismantling, construction, and operation.

The main responsible persons and their roles are identified in the table below.

Table 1. Roles and Responsibilities in Waste Management

Responsible person	Powers and responsibilities
PIU Manager (Project Manager)	• ensuring the dissemination of the Waste Management Plan to all contractors; • providing training for personnel and contractors;
Environmental, Occupational Health and Safety Manager of the PIU (Occupational Health and Safety Manager)	• ensuring the implementation of the Waste Management Plan, reporting to the Project Manager and the EIB; • periodic review and update of the Waste Management Plan; • provision of training to personnel and contractors; • monitoring of waste management methods by contractors, including the amount of waste generated, the amount of waste sent for recycling/disposal, waste storage facilities; • monthly monitoring of waste management methods, including waste storage areas; • conducting regular internal audits during construction (quarterly) and operation (annually);
Contractor Manager / Environmental, Occupational Health and Safety Manager	• ensuring the implementation of the Waste Management Plan and training of personnel on waste management; • reporting to the Environmental, Occupational Health and Safety Manager of the PIU; • conducting daily inspections of construction waste management, including waste storage areas; • identifying and recording deviations and taking corrective actions;
Construction workers and maintenance personnel	• participation in trainings necessary to gain knowledge in waste management; • implementation of the Waste Management Plan.

4. Communication and Training

It is necessary to familiarize all employees of the enterprise, including contractors, with the Waste Management Plan and other basic principles in the field of waste management in a timely manner. All involved contractors should be aware of and ensure that the enterprise's requirements for waste management on-site or off-site are met.

The PIU Manager will ensure that sufficient training is provided to all employees of the enterprise (including contractor's personnel).

The Environmental, Occupational Health and Safety Manager of the PIU will be responsible for training all employees, including the General Contractor's personnel.

The training program will be developed to familiarize all construction and operational personnel with the following aspects:

- roles and responsibilities in waste management;
- key aspects of this plan;
- basic principles of waste management, including the hierarchy;
- requirements for separate waste collection and sorting, as well as requirements for waste storage;
- principles of hazardous waste management.

After completing the relevant training, the results are recorded in the appropriate form (journal) with the preparation of a report.

In the event of the detection of waste generated during construction, but not taken into account by this Plan, the responsible Contractor Manager must add previously unknown waste to the list of waste, develop and describe measures for their management and storage. After this, it is necessary to instruct employees on how to handle the newly discovered waste.

Information on new waste and developed waste management measures, as well as information on the contractors' staff, is sent to **the Environmental, Occupational Health and Safety Manager of the PIU and the PIU Manager** to update the current Waste Management Plan and to train personnel on waste management.

A report on the implementation of this Waste Management Plan and personnel training on waste management is prepared quarterly by the responsible Environmental, Occupational Health and Safety Manager of the enterprise.

5. Approach to Waste Management

5.1 Classification of Waste

The hazard class of waste depends on the content of highly toxic substances, which is determined either by a calculation method or based on the list of wastes provided in the National List of Waste (NLW). A technical data sheet is developed for all types of waste in accordance with the interstate standard DSTU 2195-99.

Hazard Class I:

1. Used fluorescent lamps.

Hazard Class II:

2. Lead-acid batteries.

3. Alkaline batteries, including defective nickel-cadmium batteries.

4. Damaged or used lead batteries (from vehicles).

Hazard Class III:

5. Used or degraded motor oils and lubricants.

6. Sand contaminated with petroleum products.

7. Degraded, contaminated or used wiping materials (oily rags).

8. Degraded, contaminated or used filter materials (automotive filters).

9. Waste such as paint and varnish residues.

Hazard Class IV:

10. Tires that are damaged prior to use, worn out, or contaminated during use.

11. Used brake pad linings from vehicles.

12. Ferrous scrap metals (including decommissioned equipment).

13. Non-ferrous scrap metals (including from decommissioned equipment, cabling products).

14. Waste paper.

15. Residual abrasive materials.

16. Abrasive metallic dust.

17. Welding electrode stubs.

18. Used work clothing.

19. Worn-out or damaged footwear.

20. Damaged, used or contaminated protective clothing (canvas gloves, dielectric gloves, canvas protective clothing).

21. Damaged or used rubber products and materials (rubber gloves, dielectric mats).

22. Damaged plastic materials and products (phone booths, safety helmets).

23. Worn-out equipment and components, including computer hardware (excluding UPS units and batteries).

24. Wood waste.

25. Construction and demolition waste.

26. Sludge waste (residue from sieving, sand removal, stabilised or solidified waste).

5.1.1 Reconstruction and Demolition Phase

Waste that can be generated during construction/reconstruction (including demolition)

Low-Hazardous Waste – Hazard Class IV

- waste soils;
- concrete, reinforced concrete and standard concrete;
- natural stones (crushed stone) resulting from topsoil removal;
- mixed inert materials (sand, sand-soil mixture);
- asphalt;
- scrap metal, including all types of metals;
- glass;
- sawn timber and wood intended for recycling;
- cardboard and paper – packaging elements from equipment and materials;
- plastic waste and polymers – packaging elements from equipment and materials;
- municipal solid waste (MSW);
- welding electrode stubs.

Hazardous Waste:

- Fluorescent lamps – Hazard Class I;
- Used solvents, paint, and associated packaging – Hazard Class III;
- Used fuel and lubricants – Hazard Class III;
- Containers from paints and varnishes – Hazard Class III.

5.1.2 Operational Phase

Low-Hazardous Waste – Hazard Class IV

- Dewatered sludge (suspended solids) – Hazard Class IV;
- Fluorescent lamps – Hazard Class IV;
- Ferrous scrap metals – Hazard Class IV;
- Municipal solid waste (MSW) – Hazard Class IV;
- Sweepings from the WTP site cleaning activities – Hazard Class IV.

Hazardous Waste:

- Reverse osmosis membranes and cartridges – Hazard Class III;
- Laboratory chemicals – Hazard Class III;
- Waste from inorganic chemical products – Hazard Class III.

5.2 Applying the Principle of Waste Hierarchy

All waste management-related measures within the framework of the project shall be in line with the waste hierarchy approach, as specified in the Law of Ukraine and international requirements (Waste Directive, the EIB's standards).

The waste hierarchy requires that waste management measures are implemented in the most efficient and appropriate manner.

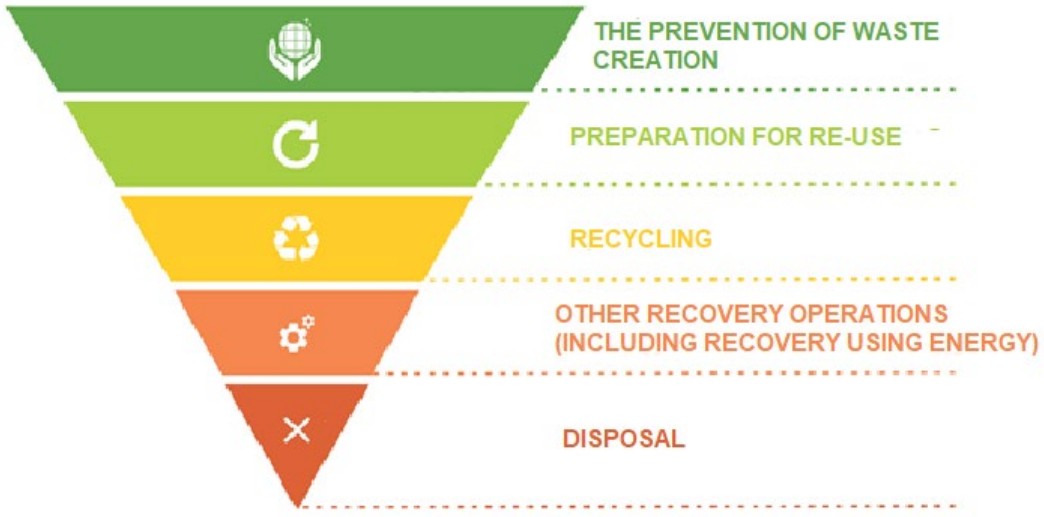

Figure 1: Waste Management Hierarchy

5.3 Measures To Prevent or Reduce the Generation of Waste

To prevent or reduce the generation of waste, it is necessary to:

- analyse the potential for transferring generated waste to municipal enterprises or other specialised organisations for use prior to project implementation;
- conduct market research to determine the demand for recoverable components (such as metal, cardboard, paper, glass, etc.) for their subsequent resale;
- develop a detailed engineering design (DED). The "Construction Organisation Plan" section shall specify the required number of designated storage areas for dismantled equipment and materials, temporary waste storage locations, the number of vehicles, and the schedule for transporting materials (waste) from the sites to interim storage or accumulation locations;
- assess in detail the need for materials and procure only the quantities necessary for the project;
- conclude supply contracts that include return clauses for surplus or unpackaged materials;

- conclude a waste disposal contract with a licensed waste management company, including a waste transport license and access to authorised disposal sites for project-related waste;
- order materials in bulk packaging to reduce the amount of packaging;
- utilise reusable packaging materials.

5.4 Collection and Storage of Waste

At all stages of the project, the basic rules for the collection and storage of waste shall be followed, as established for construction and demolition waste, as well as for industrial and household waste:

- Different types of waste shall be collected separately.
- The waste storage area shall be organised to ensure the separate collection of waste.
- The waste storage area shall be fenced, where necessary, enclosed, and equipped with a protective barrier to prevent leakage and seepage of leachate that may form when waste is mixed with sludge.
- Waste storage areas and waste containers shall be properly labelled. Waste container labelling shall include information about the type and hazard class of the waste.
- Containers with liquid waste shall be placed on trays. The volume of such trays shall exceed the following thresholds:
  - ✓ 10% of the total volume of all containers placed in a single tray, and
  - ✓ 100% of the volume of the largest container in a tray.
- Containers shall be protected from rain by canopies or other elements that prevent rainwater from mixing with the waste and entering a tray.
- Storage areas for hazardous waste shall be sufficiently separated from those for non-hazardous waste and have restricted access. If the waste is stored indoors, a ventilation system shall be provided.
- Waste shall be stored in containers that are provided in sufficient quantity and capacity.
- Container overloading shall be avoided, and the conditions of use specified by the manufacturer shall be followed.

5.5 Recycling and Reuse of Waste

Reuse/recycling may be carried out both on-site and off-site. The following considerations should be taken into account for reuse/recycling:

- Selective demolition of structures and careful removal of materials that can be reused or recycled.
- Where possible, waste shall be reused on-site (e.g., construction waste: backfilling material, timber) or transferred to companies that can facilitate reuse (e.g., concrete products, crushed stone for road construction companies).
- Use of surplus soil for backfilling, provided it is not contaminated.
- All recyclable waste shall be transferred to specialised recycling companies.

5.6 Transfer of Waste

Waste that cannot be reused on-site shall be transferred to specialised companies in accordance with the following rules:

- The transfer of waste to a specialised waste management company shall be ensured through the conclusion of contracts with such companies, including landfill operators. Counterparties shall hold a valid waste management license, if required by applicable legislation. Transport companies shall also provide the necessary transport documentation. Waste management companies shall provide a certificate confirming the acceptance and processing of the waste, verifying its delivery to the removal/disposal site.
- Waste contractors shall ensure the application of appropriate waste management methods (including those mentioned above).

5.7 Hazardous Waste Management

Particular attention shall be paid to waste classified as hazardous. Project activities and personnel shall adhere to the following principles for the generation and management of hazardous waste:

- Use safe alternatives to hazardous materials wherever possible.
- Prioritise the reduction of hazardous waste generation.
- Conduct regular maintenance of equipment to prevent potential fuel spills.
- Separate hazardous waste storage areas and equip them in accordance with hazardous waste storage requirements (e.g., secondary containers or trays).
- Hazardous waste shall not be disposed of on-site under any circumstances.
- Provide appropriate training for personnel involved in hazardous waste management.
- Ensure proper labelling of each drum or other hazardous waste container, indicating the waste code according to national classification, hazard class, and warning symbol.

6. Waste Management Plan

Based on the principles described above, the planning of waste management is given in the table below.

The table shall be updated upon completion of the detailed engineering design, with consideration given to the details of demolition activities.

Table 2. Waste Management and Disposal Plan

Type of waste	Hazardous / non-hazardous ****	Approx. quantities (tonnes)	Waste storage details	Waste management and disposal option		
				Reuse/recycling		Disposal
				On-site (how the materials will be used)	Off-site Indicate a reuse/recycling contractor	Indicate a contractor and/or a landfill
Demolition and Construction Phase						
Fluorescent lamps	I	0.00108	They are stored in a sealed metal container with a lock. Each lamp is individually packed in original corrugated packaging.	-	-	They can be transferred to specialised companies licensed for further disposal, in accordance with the terms of the contract
Waste soils	IV	*	On a designated hard-surfaced area	During backfilling	-	-
Concrete, reinforced concrete, concrete tiles	IV	21,900	On a hard-surfaced platform	-	** - for use in civil works	They can be transferred to a specialised company (MSW landfill) in accordance with the terms of the contract (to be used as an insulating layer)
Natural stones	IV	*	They should be arranged in conical piles on a hard-surfaced platform	-	** - for use in civil works	-
Asphalt	IV	171.7	On a hard-surfaced platform		** - for use in civil works	
Mixed inert materials	IV	*	On a hard-surfaced platform	During backfilling	** - for use in civil works	-

Type of waste	Hazardous / non-hazardous ****	Approx. quantities (tonnes)	Waste storage details	Waste management and disposal option		
				Reuse/recycling		Disposal
				On-site (how the materials will be used)	Off-site Indicate a reuse/recycling contractor	Indicate a contractor and/or a landfill
Scrap metal, including all types of metals	IV	235.4	It should be arranged in conical piles on a hard-surfaced platform	-	**- for sale Grand Metal-KR, LLC (or other companies)	-
Standard glass for recycling	IV	*	In containers with lids	-	**- for sale	-
Sawn timber and wood	IV	*	Indoors, in containers	Installation of temporary formwork	** - for incineration and heat energy recovery	-
Cardboard and paper for recycling	IV	*	Indoors, in containers	-	**- for sale	-
Plastics and polymers	IV	*	Container	-	**- for sale	-
Municipal solid waste (MSW)	IV	5.5	Container with a lid	-	-	***-landfill It can be transferred to a specialised company (MSW landfill) in accordance with the terms of the contract
Used solvents, paints	III	*	Hermetically sealed container	-	-	The specialised company selected by the Contractor
Waste oils and lubricants	III	0.022	Hermetically sealed container	-	-	The specialised company selected by the Contractor
Welding electrode stubs	IV	0.07	Container	-	-	The specialised company selected by the Contractor
Packaging of paints and varnishes	III	*	Container	-	-	The specialised company selected by the Contractor
Operational Phase						
Dewatered sludge (suspended solids)	IV	16,731.6	The dewatered sludge is loaded onto trucks using screw conveyors.	-	** - for use in civil works	It can be used in civil works or transported to the MSW landfill in accordance with the terms of the contract to be

Type of waste	Hazardous / non-hazardous ****	Approx. quantities (tonnes)	Waste storage details	Waste management and disposal option		
				Reuse/recycling		Disposal
				On-site (how the materials will be used)	Off-site Indicate a reuse/recycling contractor	Indicate a contractor and/or a landfill
						used as an insulating layer
Fluorescent lamps	IV	0.012	In appropriate packaging, in a restricted-access facility	-	**- for sale	-
Ferrous scrap metals	IV	2.143	On a designated hard-surfaced area	-	**- for sale Grand Metal-KR, LLC (or other companies)	-
Municipal solid waste (MSW)	IV	3.65	Container with a lid	-	-	***-landfill It can be transferred to a specialised company (MSW landfill) in accordance with the terms of the contract
Sweepings from the WTP site cleaning activities	IV	30	Container	-	-	***-landfill They can be transferred to a specialised company (MSW landfill) in accordance with the terms of the contract
Reverse osmosis membranes and cartridges	III	75.348	Hermetically sealed container	-	-	Recycling is currently not possible. At present, there are two disposal methods: either high-temperature incineration or landfill. They can be transferred to a specialised company (MSW landfill or incineration plant "Enerhiia") in accordance with

Type of waste	Hazardous / non-hazardous ****	Approx. quantities (tonnes)	Waste storage details	Waste management and disposal option		
				Reuse/recycling		Disposal
				On-site (how the materials will be used)	Off-site Indicate a reuse/recycling contractor	Indicate a contractor and/or a landfill
						the terms of the contract
Laboratory chemicals	III	0.041	Hermetically sealed container	-	-	They can be transferred to a specialised company in accordance with the terms of the contract
Waste from inorganic chemical products	III	0.018	Hermetically sealed container	-	-	It can be transferred to a specialised company in accordance with the terms of the contract

* - estimated quantities and volumes will be specified in the detailed engineering design;
** - details of the option selection for transferring waste to other companies will be determined at later stages;
*** - details of disposal of waste by other companies will be determined at later stages;
****- Hazardous waste: hazard class I, II, III; low-hazardous waste: hazard class IV.

7. Monitoring and Reporting

The Contractor's Environmental Health & Safety (EHS) Manager shall monitor on-site waste management practices on a daily basis during the construction phase. During the operational phase, such monitoring shall be conducted by the entity's EHS Manager on a monthly basis.

Furthermore, the entity's EHS Manager shall conduct both quarterly and annual internal audits during both the construction phase and the operational phase, respectively.

The findings of such checks and monitoring will be communicated to the Project Manager and the EIB as part of the annual reports.

Based on the findings of monitoring and audits, the relevant corrective and/or improvement measures will be developed and implemented. The progress of implementation of these measures will be also communicated and monitored.

The types of waste, the quantities generated, reused, and transferred will be recorded on a monthly basis. The template for maintaining the monthly register is given in the table below:

Table 3. A Form for Maintaining the Waste Register

Waste type	Hazardous/ Non-hazardous	Generated waste (t)	Reused waste (t)	Transferred (t)	Transport company	Final recipient company

According to the Law of Ukraine, a Waste Declaration shall be submitted by the MC "Mykolaivvodokanal" once a year by 20 February of the year following the reporting year, in electronic format via the Unified State Web Portal of Electronic Services, by completing the form approved by the Resolution of the Cabinet of Ministers of Ukraine No. 556 of 7 May 2022, titled "Certain Issues Regarding the Submission of the Waste Declaration". A standard template of the Form is provided in Table 4.

Table 4. Standard form No. 1

APPROVED
by the Resolution of the Cabinet of Ministers of Ukraine
No. 556 of 7 May 2022
(as amended by the Resolution of the Cabinet of Ministers of Ukraine No. 876 of 19 August 2023)

WASTE DECLARATION

Name of the applicant: "MUNICIPAL COMPANY "MYKOLAIVVODOKANAL"", Production site No. 2

Identification code of the entity according to EDRPOU: 31448144

Code according to KATOTTG or coordinates of corner points in the system: WGS-84 UA48060150010393291

Code and name of the type of economic activity according to KVED (*equivalent to NACE*): 36.00 – Water collection, treatment, and supply

Registered office address of the entity: Ukraine, 54055, Mykolaiv oblast, Mykolaiv, POHRANYCHNA STREET, bldg. 161

Email address and contact phone number of the applicant: e-mail:office@vodokanal.mk.ua; phone: (0512) 58 70 90

I. Waste Generation or Acquisition of Ownership of Waste

Number (I)	Waste Name*	Waste Code*	Volume of Waste Accumulated at the Start of the Reporting Year, tonnes	Information on Waste for Which the Right of Ownership, Use, Handling Has Been Acquired in the Reporting Period						Volume of Waste Generated by the Declaring Applicant, tonnes
				acquired from a generator (owner) within Ukraine, tonnes		acquired from a generator (owner) outside Ukraine				
				generator (owner) details**	volume of waste, tonnes	generator (owner) details (indicate name and country of registration of the counterparty)	volume of waste, tonnes	code according to the List A or B of the Basel Convention	notification identifier (List A of the Basel Convention) or conclusion identifier (List B of the Basel Convention)	
Total	X	X		X		X		X	X	X

II. Collection of Municipal Waste

Number (II)	Waste Name*	Waste Code*	Volume of Municipal Waste Collected in the Course of Providing Waste Management Services, tonnes
Total	X	X	

III. Waste Treatment Operations, Particularly with Regard to Hazardous Waste***

Number (I, II)	Waste Code*	Details of Waste Used by the Declaring Applicant for Reuse, Recycling, Recovery, or Disposal			Details of Waste Generated from Reuse, Recycling, Recovery, or Disposal of Waste by the Declaring Applicant						
		volume of waste, tonnes	code of the planned waste treatment operation****	description of the waste treatment operation*****	number (III)	waste code*	volume of waste, tonnes	permit number for waste treatment and/or decision (order) number on the issuance (extension) of a license (indicate decision (order) number on the issuance (extension) of a license in case of hazardous waste management)	code according to the List A or B of the Basel Convention (indicate in case of hazardous waste management)	code of the operation which resulted in waste generation*****	description of the waste treatment operation*****
Total	X		X	X	X	X		X	X	X	X

IV. Transfer of Waste

Number (I, II, III)	Waste Code*	Generator (Owner) Details						Volume of Waste Remaining at the End of the Reporting Year, tonnes
		transferred to a generator (owner) within Ukraine**		transferred to a generator (owner) outside Ukraine				
		generator (owner) details**	volume of waste, tonnes	generator (owner) details (indicate name and country of registration of the counterparty)	volume of waste, tonnes	code according to the List A or B of the Basel Convention	notification identifier (List A of the Basel Convention) or conclusion identifier (List B of the Basel Convention)	
Total	X	X		X		X	X	

* Waste code and name according to the National List of Waste approved in the prescribed manner.

** Name, registered office address, and identification code according to EDRPOU (or foreign entity code) of the economic entity that transferred the waste.

*** To be filled in by applicants who hold a permit for waste treatment operations and/or a license to carry out an economic activity related to hazardous waste management.

**** Waste disposal operations codes (D-codes) shall be indicated as listed in Annex 1 to the Law of Ukraine "On Waste Management", and waste recovery operations codes (R-codes) shall be indicated as listed in Annex 2 to the Law of Ukraine "On Waste Management".

***** To be filled in if the code in columns 4 or 11 does not fully reflect the nature of the operation.

{Form of the Declaration as amended by the Resolution of the CM No. 876 of 19 August 2023}