

WASTE MANAGEMENT PLAN FOR ARTIK COMMUNITY OF SHIRAK MARZ OF THE REPUBLIC OF ARMENIA

Legal framework

1. The waste management sector of the Republic of Armenia is regulated by laws on “Waste Disposal and Sanitary Cleaning”, “Waste”, “Local taxes and fees”, “Environmental Impact Assessment and Expertise”, “Environmental fee rates”, “Lisenzig”, “Residential buildings”, “Ensuring sanitary and epidemiologic safety of the population of the Republic of Armenia”, as well as Administrative Offenses and the Tax Codes of the Republic of Armenia and a number of by laws.
2. Out of 501 communities of the republic, waste collection and sanitation cleaning is carried out mainly in urban areas and suburban rural areas. According to the data of June 1, 2019, waste collection is not carried out in 58 communities of the republic at all. Waste collection and sanitation works in 443 settlements of the country are carried out by 274 organizations, including 208 by community and community non-profit organizations.
3. Waste collection costs in the communities of the Republic of Armenia twice exceed the fees collected for the services. In particular, the collected waste/garbage collection fees in the regions of Armenia make up 43.9% of the expenses on waste/garbage collection, while in the republic (including Yerevan) - 50%.
4. At the same time, there is a deplorable situation in the garbage disposal sites, landfills and garbage dumps. Waste disposal sites in the country, such as landfills, do not meet international or any urban, environmental and sanitation and hygiene standards and are solely garbage dump. They mostly do not meet the hygiene and sanitation standards and are exploited in an uncoordinated manner. In particular, they are not fenced, due to which the homeless and animals can access the area, there is no waste registration system, there is no equipment for washing and disinfecting garbage trucks, the places waste is not covered by soil which causes self-immolation leading to air, water and soil pollution, in particular with dioxides, the negative impact of which on human health is apparent.

STATE BODY POWERS IN WASTE MANAGEMENT SECTOR

5. The powers of different bodies of the public administration system in waste management sector are summarized in the table below.

Table 1. The powers of public administration system in waste management sector

Public administration system	Competence
RA Ministry of Territorial	- Participation in the formation of state policy in waste

<p>Administration and Infrastructure</p>	<p>collection and sanitation sector.</p> <ul style="list-style-type: none"> - Development of targeted programs of territorial significance in waste collection and sanitary cleaning sector. - Development and coordination of programs aiming to improve waste collection services. - Development of draft legal acts regulating the field of waste collection and sanitation cleaning <ul style="list-style-type: none"> - Coordination of uncontrolled and unauthorized landfill elimination (liquidation) works. - Participation in international cooperation in solid waste disposal sector - Ensuring the introduction of a waste collection system in accordance with international norms. - Development of an effective, coordinated and unified policy of waste collection and sanitation cleaning in the regions of the Republic of Armenia. <p>As well as:</p> <ul style="list-style-type: none"> - Development of effective schemes for waste collection and sanitation cleaning, landfill operation and proposals for improving the contractual field of waste collection in the settlements of the Republic of Armenia - Implementation of activities in the introduction of solid waste recycling system. - Implementation of activities aimed at reducing the effects of climate change and increasing adaptation in the settlements of the Republic of Armenia.
<p>Ministry of Environment of the Republic of Armenia</p>	<ul style="list-style-type: none"> - Participating in the formation of state policy in waste use sector. - Drafting of targeted programs in waste management sector. - State registration of waste. - Establishment of waste placement limits for legal entities and individual entrepreneurs. - Drawing up of banned and hazardous waste lists. - Definition of hazardous waste list. - Submitting proposals on the provision of permits for transboundary transit of hazardous. - Agreeing upon the location of waste disposal facilities. - Agreeing upon hazardous waste passports compiled by waste generators. - Establishment of an information bank on the volume of waste generated. - Implementation of state environmental expertise of design documents of construction, renovation and exploitation of polygons, complexes, buildings and other specially designated areas or objects during the production, processing, use, placement and disposal of waste in accordance with the law. - Managing state waste cadastre. - Exchanging information on low-waste and wasteless technologies with other agencies. - Creating registry for the areas and disposal sites for waste generation, processing and use, as well as monitoring.

	<ul style="list-style-type: none"> - Development of draft legal acts regulating waste use sector and adoption of by-laws within the scope of its competence. - Signing of international agreements on waste management sector and on transboundary waste transportation. - Exchanging information with international organizations and foreign competent countries in waste use sector - Approving the reports submitted by the objects generating, processing and using wastes and registry book samples - Approving the waste disposal register template and register book template. - Approval of waste passports templates. - Establishment of a sample for waste generation norms and placement limits for their calculation. - Approval of the list of production (including mine use) and consumption waste generated in the territory of the Republic of Armenia.
<p>Inspectorate for Nature Protection and Mineral Resources</p>	<ul style="list-style-type: none"> - Control and/or other functions defined by law, including the use of measures of responsibility in environmental and interal resources sector in the following directions: - Compliance with the requirements for the export of hazardous materials and waste from the Republic of Armenia, their import and export through the territory of the Republic of Armenia., - -Compliance with regulatory requirements of waste generation and placement, - -Fulfillment of waste passporting and registry requirements, - Compliance with the rules of state waste management. - Compliance with the requirements for the submission of joint tax calculations for environmental tax and nature use fees, , order and accuracy requirements . - With regard to atmospheric air protection- compliance with storage or combustion restrictions, requirements of industrial, household wastes in the residetial areas or waste polluting the atmosphere with dust, harmful gases and foul-smelling substances - With regard to the use and conservation of water resources- fulfillment of requirements for the installation of landfills, tips, cemeteries and other objects that have indirec harmful effect on water resources.
<p>RA MINISTRY OF HEALTH</p>	<ul style="list-style-type: none"> - Development of state policy in esuring sanitary and epidemiological security of the population and its implementation - Development of human and public health care, population health improvement, disease prevention policy and its implementation. - development and approval of sanitary rules. - -Implementation of socio-hygienic observations and

	<p>studies on the impact of environmental factors on the health of the population.</p> <ul style="list-style-type: none"> - Esurig organizational methodological management of sanitary-epidemiological security of the population
HEALTH AND LABOR INSPECTION BODY OF THE GOVERNMENT OF THE REPUBLIC OF ARMENIA (HLIB)	<ul style="list-style-type: none"> - Implementation of control measures over the maintenance of the requirements of the RA legislation on ensuring the sanitary-epidemiological safety of the population and sanitary-epidemiological preventive measures, - Within the frames of the control sampling and instrumental measurements for sanitary inspection and laboratory tests - Methodical management of sanitary and epidemiological inspection - Carrying out inspections of the impact of environmental factors on the health of the population.
RA URBAN DEVELOPMENT COMMITTEE	<ul style="list-style-type: none"> - Separation of specially regulated objects of urban development activities, regulation of urban development activities and ensuring the conditions for the development of construction conditions in them. - Development of spatial development programs aimed at to improving the ecological condition of cities, reducing the negative effects of urbanization on the environment, as well as increasing adaptation to climate change

The basic legislation related to the waste collection system is described in Table 2 below.

Table 2

Legislation	Regulatory scope
RA Law on Waste Collection and Sanitary Cleaning	<p>The law defines:</p> <ul style="list-style-type: none"> - Powers of the Government of the Republic of Armenia in waste collection and sanitation sector, - waste collection fee framework, - waste collection and sanitation cleaning requirements - basis for waste collection fee, its rate, calculation and payment procedure, - the rights, responsibilities and liabilities of

	those who pay for waste collection
RA Law on Wastes	<p><i>The law defines:</i></p> <ul style="list-style-type: none"> - Liabilities of the state administration and local self-government bodies in waste use sector, - State normalization in the field of waste use, registration, passporting, statistical reporting and standardization - The rights and obligations of entities in waste use sector - Economic incentives for waste disposal and reducing waste generation volumes
The law of the Republic of Armenia on local self-government	<p><i>The law defines:</i></p> <ul style="list-style-type: none"> - Waste collection and sanitation of the community, provision of communal services as a mandatory task of the community, - Waste collection and sanitation in the community, as well as the implementation and organization of other powers provided for by the Law of the Republic of Armenia “On Waste Collection and Sanitary Cleaning” by the head of the community. - Definition of fees paid to the community budget by the community council for the organization of garbage collection and sanitation, for the implementation of services in order to solve the living problems of the community population, and approval of the amount of those fees by the decision of the community council.
RA law on local self-government in the city of Yerevan	<ul style="list-style-type: none"> - The liabilities of the major in waste collection sector are defined (organizes waste collection, improvement and landscaping of city streets, squares, parks and other public places of general use and other liabilities imposed by the RA law on Waste Management and Sanitary Cleaning.
RA Law on Local Taxes and Fees	<p>The law defines a local fee as a fee:</p> <ul style="list-style-type: none"> - for the organization of waste collection activities by the community for the waste collection fee payers, - For granting permits to a legal entity, sole proprietors for the collection and transfer of construction and large scale waste collection fee payers
RA Law on Environmental Impact Assessment and Expertise	<p>The law regulates:</p> <ul style="list-style-type: none"> - Environmental Impact Assessment and Expertise Process taking into account the composition of the waste, the degree of hazard, volume, use, recycling, transportation, neutralization, storage, burial, maintenance, protection, - Activities targeting mandatory strategic assessment and expertise in waste use sector - Hazardous waste collection, storage, use, processing, recycling, disposal, neutralization, placement, burial

	- Organizing landfills for the service of more than 15,000 people or landfills that receive 10 tons or more waste per day and (or) recycling of household waste
RA Law on Environmental fee rates	The law sets the rates for the duly placement of production and consumption waste in the environment
RA Law on Licensing	The law defines the use of hazardous waste as an activity subject to licensing.
RA Law on Ensuring Sanitary and Epidemiological Safety of the Population of the Republic of Armenia	The law stipulates the mandatory requirement for compliance with sanitary rules during the collection, processing, use, disinfection and burial of industrial and household waste.
RA Law on Management of Apartment Buildings	The law stipulates the mandatory requirement for the implementation of mandatory norms, including sanitary and communal service measures.
RA Code on Administrative Offenses	The Code defines the relevant penalties for violating the rules of waste collection and sanitation, and dumping waste in undefined places.
RA Tax Code	The Code defines the rates of environmental tax for the placement of production waste (or) consumption waste in specially designated areas, such as waste disposal sites, polygons, waste accumulation sites, landfills, complexes and/or buildings.

CURRENT SITUATION OF WASTE MANAGEMENT IN THE REPUBLIC OF ARMENIA

6. Waste collection in Armenia, as well as the definition of waste collection rates, the approval of the procedure for waste collection are within the competence of local self-government bodies.
7. Waste collection and sanitary cleaning activities carried out in the territory of the community are financed from the community budget by a separate spending program or extrabudgetary account.
8. According to the decision of the community council, the waste collection and sanitary cleaning works are carried out on account of the community budget directly by the community institutions or the operator or operators selected for the needs of the community in accordance with the procurement legislation. The operator is authorized to collect and transport waste by the community head in accordance with the conditions and procedure approved by the community council.
9. Waste collection fee is a mandatory fee charged to the community budget or extrabudget. Waste collection rates are set by the community council and according to the RA legislation, the maximum monthly fee is AMD 400 per capita, or according to the total area of one square meter of a residential building or apartment, a maximum of AMD 25. Waste collection fees in the communities of the republic make AMD 50 to 300 person per month.

10. Waste collection in the communities of the Republic of Armenia is carried out either by community organizations or by the private sector operating in the communities. As of January 1, 2019, the technical equipment of solid waste collection and sanitary cleaning in the regions of Armenia is about 774 garbage trucks and 11,868 garbage bins. Table 3 below shows the number of garbage trucks and garbage bins in the settlements of the republic by regions and Yerevan city.

Table 3. The number of waste collection tracks and garbage bins in RA administrative regions and Yerevan

Administrative region and Yerevan city	Number of garbage trucks	Including machinery with compression function	Number of garbage bins
Aragatsotn	86	6	627
Ararat	200	50	873
Armavir	81	13	1714
Gegharkunik	50	10	1354
Lori	77	37	2274
Kotayk	99	32	1790
Shirak	73	26	1921
Syunik	34	15	739
Vayots Dzor	29	8	68
Tavush	45	7	508
Yereva	51	43	5570
Total	825	247	17 438

WASTE COLLECTION PROCEDURE OF ARTIK COMMUNITY

11. Waste collection is part of the process of waste management. It is a mandatory and regular work in compliance with the sanitary-hygienic rules and norms defined by the legislation. Waste collection, storage, transportation and landfill control is implemented by the community head.
12. The implementation of waste management should be based on the following main objectives and principles:
- 1) Reduction and neutralization of adverse (hazardous) impacts of waste on human health and the environment,
 - 2) Ensuring comfortable and environmentally secure conditions for the population,
 - 3) Inadmissibility of contamination of areas, accumulation of garbage piles and cleaning areas from garbage.

Requirements for Waste Collection, Storage, Transportation and Placement

13. Household waste is collected and stored in specially designated areas of the community or designated areas and containers provided by the community- bins or trash cans.
14. Non-household and large-scale waste is collected and stored/placed in the bins or containers acquired through waste collection fee payers or in the appropriate area envisaged or owned by the person paying for waste collection fee, unless otherwise determined by the community council. At the request of the payers, the community can provide the trash cans on a lease basis.
15. Subjects who trade in the kiosks keep their adjacent areas in proper sanitary condition, where they do not store goods, containers or unnecessary items, consumption waste and waste generated during construction works.
16. The areas adjacent to the entrances of the commercial and service facilities (including the yard side) located on the first floors of the residential buildings are kept in proper sanitary condition, do not accumulate boxes of goods or unnecessary items, consumption waste and waste generated during construction works.
17. To maintain the sanitary condition of the adjacent areas, the mentioned subjects, at their own expense, are obliged to install garbage bins with a capacity of at least fifty liters in the area, in a convenient position for the waste disposal and removal service provider.
18. The waste is transported by specialized organizations in accordance with the procedure for waste collection. Waste transportation should be organized by garbage trucks, the structure of which excludes environmental pollution. Waste should be transported from trash cans and trash bins before they are completely filled. When removing garbage from trash cans and bins, the waste collection organization cleans and removes the waste from the area adjacent to the waste cans. During waste collection, garbage dumps and the piles of leaves are also moved. Their burning is forbidden.
19. Waste is disposed of in licensed landfills in accordance with the law or recycled. Waste placement in landfills is carried out in compliance with the requirements of landfill operation and hygienic rules. It is forbidden to place garbage in places not intended for it.

The area in the north-western part of the city, which is 3 km away from the construction zone of the city, is used as a landfill of Artik community.

Landfill maintenance, landfill leveling and covering with soil, is the responsibility of the garbage collection organization.

It is forbidden:

- 1) Keeping waste and dumping it in places not designated for that purpose
 - 2) Disposing waste in places not designated for that purpose
 - 3) Burning of consumption waste
 - 4) Placing unused medical materials, medicines, pills, caustic acids, dyes, car oils, any kind of liquids, explosives, asbestos or other similar hazardous substances and waste in places designated for garbage
 - 5) Placing bodies of dead animals in places designated for garbage.
20. Waste track bodies are disinfected in dumping sites by a garbage collection company once a month. Chlorine (10%), lysol (5-8%), creatinine (5-8%),

naphthalene (10-15%), phenol (3-5%) sodium metasilicate (1-3%) is used for desinfection or other disinfectants duly registered in Armenia in accordance of the RA Law on Medicines and imported in accordance with the procedure established by the Decision N 581 of the Government of the Republic of Armenia of September 20, 2000 "On Approval of the Procedure for Import and Export of Medicines and Drugs of the Republic of Armenia" .

Basic materials contained in household waste	Density kg/m ³
Corrugated cardboard boxes	30
Aluminum containers	37
Plastic bottles	38
Paper	120
Rubber	240
Glass containers	300
Food waste	280
Canned containers	80
Polyethylene bags	90
Average indicator	135

21. Actual measurement of the volumes of basic materials contained in household waste was carried out on the results of which the density of substances were calculated and approximate calculation of the waste generated in the territory of Artik community. The actual measurement results are shown in Table 4.

Table 4

22. The number of the population of Artik community is based on the data provided by the RA State Population Register, according to which **the population of Artik community registered in 2018 was 20780 people.**

23. Comparing data from different sources, it was found that 1.31 cubic meters of household waste is generated **annually per capita** in the last decade.

24. Based on the calculations made on the above-mentioned data, it was found out that 27221.8 cubic meters of household waste is generated annually in Artik community.

$$20780 \times 1.31 = 27221,8(\text{ m}\square)$$

25. According to Table 1, the average household waste density is 135 kg/m². 3675 tons of garbage is generated in the community annually

$$27221,8(\text{m}\square) \times 135(\text{kg}/\text{m}\square) = 3674943 (\text{kg}).$$

Minimum timeframe for garbage collection in Artik community of Shirak administrative region of the Republic of Armenia

26. Waste collection from the administrative territory of Artik community should be done from garbage bins located in the community area, from individual houses, apartment buildings, public buildings and production facilities.

27. Trash cans and bins should be disinfected once a month by a waste disposal company.

28. Based on the Order N25-Ն(part 1, subsection 2, point 15) of the Minister of Health of the RA of December 22, 2009 and Decision N 1161-Ն(point 2, subpoint 1) of the Government of the RA of October 4, 2007 the following minimum timeframe is set for carrying out household waste collection in the administrative territory of Artik community.

29. Waste collection is carried out:

- **On Mondays, Wednesdays and Fridays** from the garbage bins located in the places indicated in Annex 2.2,
- **On Mondays and Thursdays** from private houses in Lmbat 1, Lmbat 2, Lmbat 3 districts,
- **On Tuesdays and Fridays** from individual residential houses in a district north-east of Narekatsi Street (Sundukyan, Sevoyan, Duryan, Muratsan, Mashtots, Fidayinneri, Gevorg Chaush, Zoravar Andranik, Nar-Dos, Demirchyan streets),
- **On Wednesdays and Saturdays** from individual residential houses from the following streets Hakobyan, Shirvanzade, Myasnikyan, Khanjyan, Spandaryan, Ghukasyan, Kamo, Grigor Zohrap (with lanes), Aghakaryan (with lanes), Grigor Lusavorich (1st, 2nd, 3rd lanes), Babajanyan (lanes), Tufagortneri street lanes , S.-Nova,
- **twice a month** from Lmbatavank area.

The locations of garbage bins and numbers per streets in the administrative area of Artik community of Shirak region of the Republic of Armenia

Table 5

N	The location of the garbage bin	Number	Type
1	Tumanyan street	16	metal
2	Nalbandyan street	4	metal
3	Isahakyan street	5	metal
4	Gharibjanyan street	3	metal
5	Gorki street	5	metal
6	Sasuntsi Davit street	11	metal
7	Shinararneri street	7	metal
8	Gortsaranayin street	3	metal
9	Shahumyan street	12	metal
10	Baghramyan street	23	metal
11	Ankakhutyan street	10	metal
12	Tufagortsnei street	15	metal
13	Garegin Nzhdeh street	9	metal
14	Tonakanyan street	8	metal
15	Proshyan street	2	metal
16	Abovyan street	9	metal
17	Teryan street	2	metal
18	Hakobyan street	3	metal
19	Shiraz street	3	metal
20	Paruyr Sevak street	3	metal
21	Saakadze street	4	metal
22	Gruigor Narekatsi street	20	metal
23	Shirakatsi street	5	metal
24	Lmbat district	15	metal
25	Komitas district	8	metal
	TOTAL	205	

Procedure for issuing permits for non-domestic and large-scale waste collection and transportation in the territory of Artik community of the Republic of Armenia

The procedure defines:

1. Procedure for issuing permits for non-domestic and large-scale waste collection and transportation in the territory of Artik community.

The permit is given by the head of the Community. The permit can be given to a legal entity, sole proprietors, construction and large scale waste collection fee payers to collect and transfer the waste. To receive a permit, a legal entity or sole proprietor submits an application to the head of the community. The Head of community makes a decision of granting permit. To receive permit a local fee is charged from the applicant in accordance with the rates of taxes and fees defined by the Community Council and in accordance with RA Law on "On Local Duties and Fees". Within three days after receiving the receipt confirming the payment of the local fee the approved permit is given to the applicant. The application for a permit is rejected if the documents submitted by the applicant are incomplete and do not comply with the conditions approved by the Community Council. The application is rejected in writing within two days from the date of entry. If the application is rejected, the reasons and legal grounds for the rejection must be clearly stated. The permit cannot be transferred by the applicant to another person or used by another person.

2) Waste collection fee payers in Artik community are real estate owners, including apartment building owners or who own or use that property by any other right (including the sole proprietors and the patent taxpayers), legal entities, institutions, state and local self-government bodies, and in case of a possession of real estate that is considered to be state or community property on the basis of lease or gratuitous use by the citizen or a legal entity- by the leaser or user.

The registration of waste fee payers, the calculation of waste collection fees, as well as the collection (input) of that fee to the community budget are carried out by the community.

The registering of waste collection payers in Artik community, calculation of waste collection fees and entry into the community budget is carried out in accordance with the RA Laws on Local Duties and Payments, On Waste Collection and Sanitary Cleaning, in accordance with the rates set by the community council.

The head of the Artik community supervises the registration of waste fee collection payers, the calculation of waste collection fees and charging procedure.