

## **The Information on Wastewaters Flowing Down Into the Caspian Sea out From the Coastal Zones of the Azerbaijan Area**

### **The Kura River**

The Kura River, 1515 km long, being surrounded by five countries (Azerbaijan, Iran, Georgia, Armenia and Turkey) flows down through the Neftchali District of Azerbaijan and further flows down into the Caspian Sea. The water resources of the river are being created by snow (36%), rain (20%), springs (14%), underground water (30%) and playing the important role in the economic development of a number of countries. Thus the Kura River is the sole source of power, irrigation, drinking and industrial water supply for the population, economy, and legal entities of this part of the world. Average annual consumption of the Kura River up to the Araks River comes up to 623 m<sup>3</sup>/cm.a, and after the point where it splits off it comes up to 900 m<sup>3</sup>/caH-OB. The cause of the river pollution lies in the high population density along the rivers the Kura and Araks rivers in South Caucasus. Azerbaijan is the closer country for all transborder rivers which in the absence of treatment works on the sources polluting the rivers are strongly affecting upon various water bodies and sites. E.g., look at the Okhchuchay River and the the Araks River.

Following physical, biological and nuclear pollution, the Kura River has fully changed its physic-chemical sanitary-hygienic properties. Thus pesticides, heavy metal salts and other toxic substances, being presently the ingredients of the water, are the imminent danger for the health of the population, at the same time causing much harm to fauna.

<b>Indicators</b>	<b>Unit of Measure</b>	<b>The Kura River</b>
Salinity	‰	0,2
Ammonium ions (NH <sub>4</sub> )	mg/L	0,12
Nitrites (NO <sub>2</sub> <sup>-</sup> )	mg/L	0,035
Nitrates (NO <sub>3</sub> <sup>-</sup> )	mg/L	0,8

Phosphates (PO <sub>4</sub> <sup>-</sup> )	mg/L	0,10
Chlorides	mg/L	71,0
Sulphates	mg/L	115,0
Hardness	mg екв/л	5,0
Suspended substances	mg/L	14,0
Copper ions	mg/L	0,075
Nickel ions	mg/L	0,08
Iron ions	mg/L	0,13
Zinc ions	mg/L	0,21
Cobalt ions	mg/L	0,07
Lead ions	mg/L	0,002
Manganese ions	mg/L	0,112

## The Agchay

The Agchay River, 3100 km long, springs from the North-East Plain of the Main Caucasus. The river water resources are generated by snow, rain and underground waters. Flowing over Kubin and Khamchaz districts it further flows down into the Caspian Sea. Over these areas extending for 70km, the river waters are used for irrigation. The settlement Vasilyevka being the nearest one to the river is supposedly to be a source of its pollution. Annually around 1.5 thousand m<sup>3</sup> of wastewaters are discharged from the Khamchaz district down into the river.

<b>Indicators</b>	<b>Unit of Measure</b>	<b>The Agchay</b>
Salinity	‰	0,2
Ammonium ions (NH <sub>4</sub> )	mg/L	0.5
Nitrites (NO <sub>2</sub> <sup>-</sup> )	mg/L	0,12
SPAV	mg/L	0,4
Suspended substances	mg/L	6,0
Oil products	mg/L	0,02
Copper ions	mg/L	0,003
Nickel ions	mg/L	0,0025
Iron ions	mg/L	0,030

## **The Drain Canal Receiving Wastewaters From the Devichi-Broiler Joint-Stock Company and Flowing Down Into the Sea**

Daily consumption of water at the Company comes up to 155 m<sup>3</sup>. The underground waters generated in the Company's area and drain waters treated on the treatment works of the Devichi-Broiler are discharged down into the drain of 22 km long. The drain also receives the wastewaters which have been used for irrigation in the agriculture. Despite the fact that some part of the drain water having been used for agricultural purposes, according to the regular lab analyses data pesticides have not been detected.

Indicators	Unit of Measure	the Devichi-Broiler Com
pH		7,30
Salinity	‰	0,8
Ammonium ions (NH <sub>4</sub> )	mg/L	0,6
Nitrites (NO <sub>2</sub> <sup>-</sup> )	mg/L	0,07
SPAV	mg/L	0,3
BPK <sub>5</sub>	mg/L	5,0
Suspended substances	mg/L	5,0
Copper ions	mg/L	0,0040
Nickel ions	mg/L	0,005
Iron ions	mg/L	0,042

## The Sugaitchay River

The Sugaitchay River, 15 km long and 2-3 m broad, springs from the Khizin Mountains. Flowing over through the industrial area of Sumgait city it further flows down into the Caspian Sea. The main part of the river water is rain waters. In summer the river size decreases. Such factories and works as Superphosphate, TETS-2, SPAV, SK, etc. are discharging conventionally pure waters. Present time the volumes of industrial wastewaters discharges down into the river have significantly been reduced due to the decreased industrial capacities of the works and factories by 5-7%.

<b>Indicators</b>	<b>Unit of Measure</b>	<b>Сумгаитчай</b>
Salinity	‰	0,4
Ammonium ions (NH <sub>4</sub> )	mg/L	0,54
Nitrites (NO <sub>2</sub> <sup>-</sup> )	mg/L	0,042
SPAV	mg/L	0,5
Suspended substances	mg/L	6,5
Oil products	mg/L	0,05
Copper ions	mg/L	0,004
Nickel ions	mg/L	0,0057
Iron ions	mg/L	0,012

## The Drain Canals for Rainwater of the Baku Bay

Being situated between Sultan and Shih capes, the Baku Bay in the south of the Apsheron peninsula is surrounded by the Ghum, Dash Zara, Beyuk Zira islands the coastline of the Bay is of 22 km long, the depth is varying between 10-25 m, and its total area comes up to 50 km<sup>2</sup>.

Khatain, Nasimin and Sabayil districts of Baku city are situated around the Bay. Most part of the existing rainwater drains (around 80%) are flowing down into the Baku Bay over through the National Park. Following the lab analyses data, it may be noted that a few of faecal and communal wastewaters are getting into the drains.

### The “Icheri Shekher” Rainwater Drain Canal.

This Drain is discharging the collected rainwater down into the Sea and is connected with the Baku Bay over though the Sabayil District of Baku city. Also some admixing of wastewaters may be detected in it.

Indicators	Unit of Measure	Drain
pH		7,66
Salinity	‰	0,6
Ammonium ions (NH <sub>4</sub> )	mg/L	0,6
Nitrites (NO <sub>2</sub> <sup>-</sup> )	mg/L	0,12
SPAV	mg/L	0,6
BPK <sub>5</sub>	mg/L	4,2
Suspended substances	mg/L	6,7
Oil products	mg/L	0,04
Copper ions	mg/L	0,010
Nickel ions	mg/L	0,012

Iron ions	mg/L	0,045
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## The Rainwater Drain Canal on the U.Safarov Street

The Rainwater Drain Canal on U.Safarov Street starts flowing from near the Sattarkhan Machine Building Plant and further discharges collected rainwater down into the Sea (near the ferry-point).

<b>Indicators</b>	<b>Unit of Measure</b>	<b>Drain</b>
pH		7,64
Salinity	mg/L	0,5
Ammonium ions (NH <sub>4</sub> )	mg/L	0,15
Nitrites (NO <sub>2</sub> <sup>-</sup> )	mg/L	0,6
SPAV	mg/L	4,0
Suspended substances	mg/L	7,0
Oil products	mg/L	0,06
Copper ions	mg/L	0,006
Nickel ions	mg/L	0,012
Iron ions	mg/L	0,045

## The Rainwater Drain Canal on the Niyazi Street

Situated in the very heart of the city, «The Rainwater Drain Canal On the Niyazi Street» flows over through the National Park area passing by the Yacht Club, collects the rainwater of the Sabayil District living areas and the area of administrative buildings and further discharges it down into the Sea.

<b>Indicators</b>	<b>Unit of Measure</b>	<b>Drain</b>
pH		7,72
Salinity	‰	0,4
Ammonium ions (NH <sub>4</sub> )	mg/L	0,65
Nitrites (NO <sub>2</sub> <sup>-</sup> )	mg/L	0,10
SPAV	mg/L	0,6
BPK <sub>5</sub>	mg/L	4,5
Suspended substances	mg/L	5,5
Oil products	mg/L	0,04
Copper ions	mg/L	0,012
Nickel ions	mg/L	0,010
Iron ions	mg/L	0,040

## The Rainwater Drain Canal on the Mamedaliyev Street

This Drain Canal serves for collecting rainwater on the Mamedaliyev Street and further discharging it down into the Sea. The Drain is connected with the Baku Bay over through the Sabayil District of Baku city. Also some admixing of faecal and communal may be detected in it.

Indicators	Unit of Measure	Drain
pH		7,54
Salinity	‰	0,3
Ammonium ions (NH <sub>4</sub> )	mg/L	0,6
Nitrites (NO <sub>2</sub> <sup>-</sup> )	mg/L	0,10
SPAV	mg/L	0,5
BPK <sub>5</sub>	mg/L	4,8
Suspended substances	mg/L	5,0
Oil products	mg/L	0,03
Iron ions	mg/L	0,05

## The Rainwater Drain Canal on the Azadlik проспекта Азадлыг

It's the largest Drain Canal in the city (2.4m x 10 m, 8,5 km long), flowing over through the Azadlik Square and down into the Caspian Sea. Mainly, the Drain serves for collecting rainwater in the central city area and further discharging it down into the Sea. Following the lab analyses data, it may be noted that a few of faecal and communal wastewaters are getting into the drains.

<b>Indicators</b>	<b>Unit of Measure</b>	<b>Drain</b>
pH		7,68
Salinity	‰	0,3
Ammonium ions (NH <sub>4</sub> )	mg/L	0,6
Nitrites (NO <sub>2</sub> <sup>-</sup> )	mg/L	0,13
SPAV	mg/L	0,5
BPK <sub>5</sub>	mg/L	4,2
Suspended substances	mg/L	7,0
Oil products	mg/L	0,05
Iron ions	mg/L	0,024

## The Lyankoranchay River

The Lyankoranchay River, of 81 km long and with total area of 1080 km<sup>2</sup>, springs from the Kyemyurgoy Mountains in the Lerik District. The Sarachay and Konvyai rivers are its tributaries. The River supplies water for the largest part of the district area through its tributaries. The Lyankoranchay River flows down into the Caspian Sea at the Sutamirdov settlement.

<b>Indicators</b>	<b>Unit of Measure</b>	<b>Lyankoranchay</b>
pH		8,14
Salinity	‰	0,6
Ammonium ions (NH <sub>4</sub> )	mg/L	0,4
Nitrites (NO <sub>2</sub> <sup>-</sup> )	mg/L	0,05
SPAV	mg/L	0
Suspended substances	mg/L	9,0
Oil products	mg/L	0,02
Copper ions	mg/L	0,008
Nickel ions	mg/L	0,007
Iron ions	mg/L	0,018

## The Shakhagajichay River

The Shakhagajichay River, 48 km long, springs from the Talish Mountains Range in the Astarin District and partly being polluted by wastewatrs. It flows down into the Caspian Sea at the Shakhagajin village.

<b>Indicators</b>	<b>Unit of Measure</b>	<b>Shakhagajichay</b>
pH		7,75
Salinity	‰	0,1
Ammonium ions (NH <sub>4</sub> )	mg/L	0
Nitrites (NO <sub>2</sub> <sup>-</sup> )	mg/L	0,09
SPAV	mg/L	0,4
Suspended substances	mg/L	8,0
Oil products	mg/L	0,01
Copper ions	mg/L	0,007
Nickel ions	mg/L	0,004
Iron ions	mg/L	0,034