



**PREČIŠĆAVANJE I ISPUŠTANJE OTPADNIH VODA U 2018.
/Prethodni podaci/**

**TREATMENT AND DISCHARGE OF WASTE WATERS IN 2018
/Previous data/**

U 2018. ukupna količina otpadnih voda bila je 89 291 000 m³, što je za 5,6% manje u odnosu na 2017.

In 2018, the total volume of waste waters was 89 291 000 m³ which less for 5.6% in relation to 2017.

U 2018. prečišćenih otpadnih voda bilo je 51 214 000 m³.

In 2018 treated waste water was 51 214 000 m³.

U 2018. kanalizaciona mreža bila je duga 3 021 km. Broj kanalizacionih priključaka u 2018. godini iznosio je 212 690 priključaka.

In 2018 the sewage network was 3 021 km long. In 2018 the number of sewage connections amounted 212 690 connections.

1. PORIJEKLO/PODRIJETLO I PREČIŠĆAVANJE/PROČIŠĆAVANJE OTPADNIH VODA

SOURCE AND TREATMENT OF WASTE WATERS

u hilj./tis . m³

	2017*	2018	Indeksi/indices <u>2018</u> 2017	
Otpadne vode – ukupno	94.618	89.291	94,4	Total waste waters
Domaćinstva/kućanstava	66.552	60.667	91,2	Households
Poljoprivreda, šumarstvo i ribolov	145	173	119,3	Agriculture, forestry and fishing
Industrija i građevinske djelatnosti	7.949	8.562	107,7	activities
Iz ostalih djelatnosti	19.972	19.889	99,6	Other activities
Prečišćene otpadne vode – ukupno	52.438	51.214	97,7	Total purified waste waters
Primarni tretman	701	731	104,3	Primary treatment
Sekundarni tretman	51.659	50.401	97,6	Secondary treatment
Tercijarni tretman	78	82	105,1	Tertiary treatment

2. ISPUŠTENE OTPADNE VODE

DISCHARGED WASTE WATER

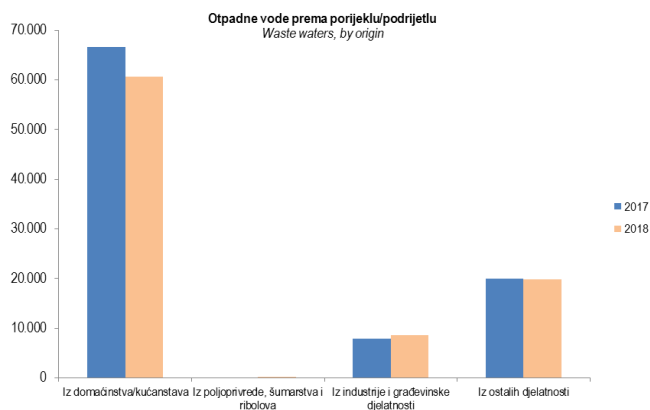
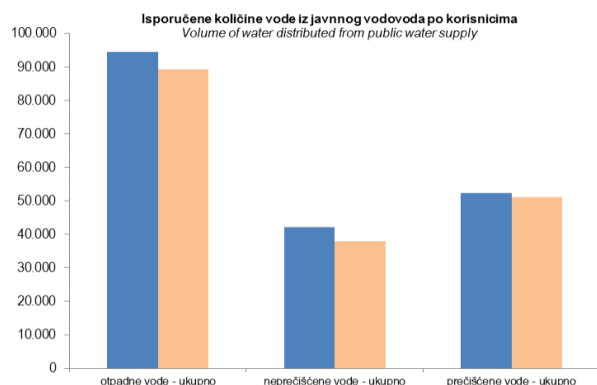
u hilj./tis . m³

	2017*	2018	Indeksi/indices <u>2018</u> 2017	
Ispuštene otpadne vode – ukupno	94.618	89.291	94,4	Total discharged waste water
Neprečišćene vode – svega	42.180	38.077	90,3	Total unpurified water
Ispuštene				Discharged
U podzemne vode	1.237	1.101	89,0	Ground water
U vodotoke	40.558	36.600	90,2	Watercourses
U akumulacije	385	376	97,7	Reservoirs
Prečišćene vode – svega	52.438	51.214	97,7	Total purified water
Ispuštene				Discharged
U podzemne vode	86	88	102,3	Ground water
U vodotoke	51.877	50.636	97,6	Watercourses
U more	475	490	103,2	Sea

3. KANALIZACIONA MREŽA

SEWAGE NETWORK

	2017*	2018	Indeksi/indices <u>2018</u> 2017	
Ukupna dužina zatvorene kanalizacione mreže, km	2.881	3.021	104,9	Total length of sewage, km
Od toga prema vrsti:				Of that, by type:
Mješoviti sistem, km	1.334	1.363	102,2	Combined system, km
Separacijski sistem, km	1.547	1.658	107,2	Separation system, km
Od toga:				Of that:
Fekalni, km	984	1.000	101,6	Faecal, km
Atmosferski, km	563	658	116,9	Atmospheric, km
Dužina glavnog kolektora, km	525	531	101,1	Length of main sewage, km
Broj kanalizacionih priključaka	207.187	212.690	102,7	Number of connecting pipes



Podaci o javnoj kanalizaciji prikupljaju se redovnim godišnjim statističkim istraživanjem (VOD-2K) od komunalnih poslovnih subjekata i od općinskih službi koje upravljaju javnom kanalizacijom u promatranim naseljima.

Otpadne vode su one koje se poslije korištenja odvođe do uređaja za prečišćavanje ili se ispuštaju u prostor (u podzemne ili površinske vode). U količine otpadnih voda nisu uključene atmosferske kao ni protočne vode (npr. vode koje pokreću hidroelektrane).

Prečišćene otpadne vode su sve one količine otpadnih voda koje se u toku izvještajne godine pročišćavaju primarnim, sekundarnim i tercijarnim tretmanom.

Primarni tretman je primjena fizikalnih i/ili hemijskih postupaka čišćenja otpadnih voda u kojima se vrijednost BPK₅ ulaznih otpadnih voda reducira za najmanje 20% prije ispuštanja, a ukupne suspendirane tvari ulaznih otpadnih voda se reduciraju za najmanje 50%.

Sekundarni tretman je primjena bioloških i/ili drugih postupaka čišćenja kojima se u otpadnim vodama smanjuje koncentracija suspendirane tvari i BPK₅ influenta za 70 – 90%, a koncentracija KPK za najmanje 75%.

Tercijarni tretman je primjena fizikalno/hemijskih, bioloških i drugih postupaka kojima se u otpadnim vodama smanjuje koncentracija hranjivih tvari influenta za najmanje 80%, odnosno uklanjaju i drugi posebni pokazatelji otpadnih tvari u granicama vrijednosti koje nije moguće postići primjenom drugog stupnja prečišćavanja.

Javna kanalizacija je mreža zatvorenih uličnih kanala i kolektora kojima se odvođe bilo otpadne i atmosferske vode (opći sistem kanalizacije) bilo posebno otpadne vode, a posebno atmosferske vode (separacijski sistem kanalizacije).

Glavni kolektor je sabirni kanal koji odvodi vode iz jednog dijela ili cijelog grada do recipijenta ili uređaja za prečišćavanje.

Kanalizacijski priključak je spoj objekata s uličnom kanalizacijom.

Kratice

BPK₅ biološka potreba kisika
KPK hemijska potreba kisika

Data on public sewage system are collected through regular annual report (VOD-2K) from municipal business entities and municipal services which run the public sewage system.

Waste water is water drained to the purification device after use, or discharged into the environment (into ground or surface waters). It does not include atmospheric or running water (i.e. waters that drive hydro-electric plants).

Treated waste water comprises all amounts of waste water that were purified during the reporting year, either primary, secondary or tertiary treatment method.

The primary treatment includes the application of physical and/or chemical processes by which the BOD₅ value of the incoming waste water is reduced by at least 20% before discharge and the total suspended solids of the incoming waste are reduced by at least 50%.

The secondary treatment includes the application of biological and/or other treatment processes by which the concentration of suspended solids and BOD₅ decreases by even 70% to 90% and the concentration of COD by at least 75%.

The tertiary treatment includes the application of physical and chemical, biological and other treatment processes by which the concentration of nutritious matters in influent waste waters decreases by as much as 80%, which means that other pollutants, which could not be removed to that extent in the secondary treatment, are now removed as well.

Public sewage system is a network of enclosed public drains and sewers used for draining of either waste or atmospheric waters (general water sewage system), or solely waste water and solely atmospheric waters (separational water sewage system).

Main sewer is a collecting drain, which drains water from one part or the whole city to the recipient or to the purification device.

Connecting pipe is a connection between the object and street drains.

Abbreviations

BOD₅ biochemical oxygen demand
COD chemical oxygen demand

Izdaje Federalni zavod za statistiku FBiH, 71000 Sarajevo, Zelenih beretki 26
Published by the Institute for Statistics of FBiH, 71000 Sarajevo, Zelenih beretki 26

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