

# SAOPĆENJE PRIOPĆENJE FIRST RELEASE



B O S N A I H E R C E G O V I N A  
FEDERACIJA BOSNE I HERCEGOVINE  
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## PREČIŠĆAVANJE I ISPUŠTANJE OTPADNIH VODA U 2013. /Prethodni podaci/ REFINEMENT AND DISCHARGE OF WASTE WATERS IN 2013 /Previous data/

U 2013. ukupna količina otpadnih voda bila je 63 345 000 m<sup>3</sup>, što je za 2% manje u odnosu na 2012.

In 2013, the total volume of waste waters was 63 345 000 m<sup>3</sup> which fell by 2% in relation to 2012.

U 2013. prečišćenih otpadnih voda bilo je 2 871 000 m<sup>3</sup>, što je 5% manje od ukupne količine prečišćenih otpadnih voda u odnosu na prethodnu godinu.

In 2013 treated waste water was 2 871 000 m<sup>3</sup>, which fell by 5% of the total quantity of waste water in relation to the previous year.

U 2013. kanalizaciona mreža bila je duga 2 734 km, što je 2% više od prethodne godine. Broj kanalizacionih priključaka u odnosu na prethodnu godinu povećan je za 2% i iznosio je 182 470 priključaka.

In 2013 the sewage network was 2 734 km long, which rose by 2% the previous year. The number of sewage connections increased by 2% and amounted 182 470 connections.

### 1. PORIJEKLO/PODRIJETLO I PREČIŠĆAVANJE/PROČIŠĆAVANJE OTPADNIH VODA SOURCE AND TREATMENT OF WASTE WATERS

	2012	2013	u hilj./tis. m <sup>3</sup>
			Indeksi/indices 2013 2012
Otpadne vode – ukupno Waste waters – total	64.775	63.345	98
Domaćinstva/kućanstava From households	45.988	44.583	97
Poljoprivreda, šumarstvo i ribolov Agriculture, forestry and fishing	209	191	91
Industrija i građevinske djelatnosti Industry and construction sectors	6.202	5.915	95
Iz ostalih djelatnosti From other activities	12.376	12.656	102
Prečišćene otpadne vode – ukupno Refinement waste waters –total	3.028	2.871	95
Primarni tretman Primary treatment	1.802	1.725	96
Sekundarni tretman Secondary treatment	1.222	1.142	93
Tercijarni tretman Tertiary treatment	4	4	100

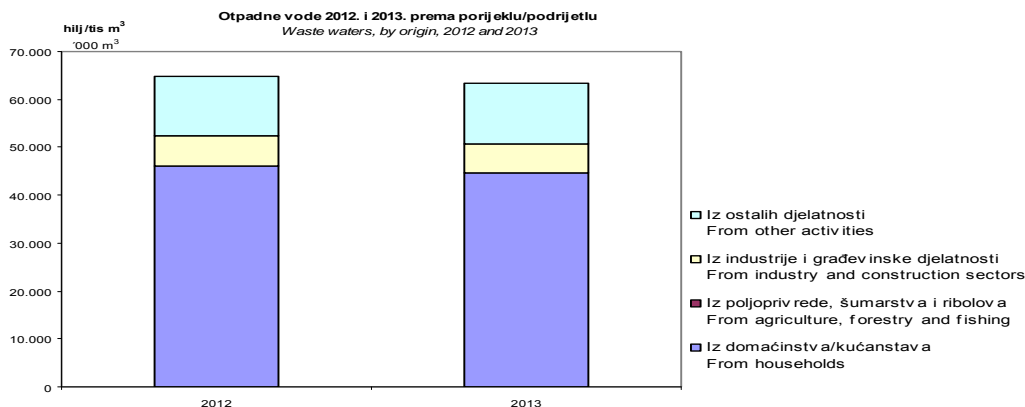
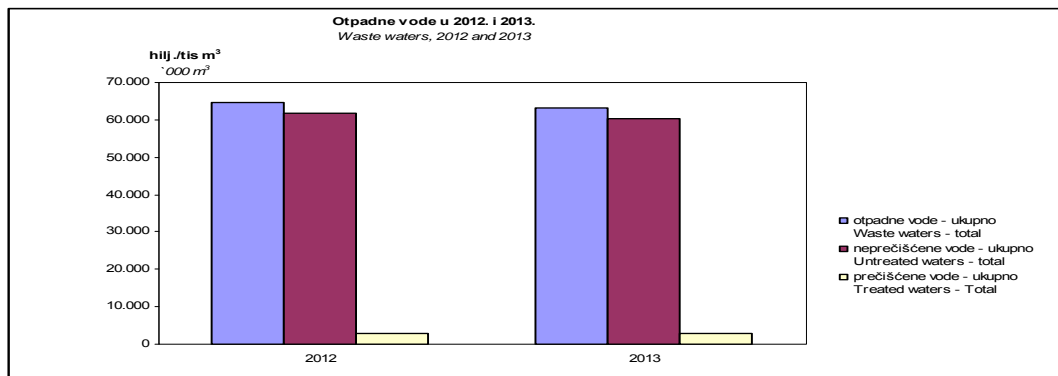
**2. ISPUŠTANJE OTPADNIH VODA**  
DISCHARGE OF WASTE WATERS

u hilj./tis. m<sup>3</sup>

	2012	2013	Indeksi/indices <u>2013</u> 2012
Ispuštene otpadne vode – ukupno <i>Discharged waste waters – total</i>	<b>64.775</b>	<b>63.345</b>	<b>98</b>
Neprečišćene vode – svega <i>Untreated waters – total</i>	<b>61.747</b>	<b>60.474</b>	<b>98</b>
Ispuštene <i>Discharged</i>			
U podzemne vode <i>Into ground waters</i>	1.817	1.696	93
U vodotoke <i>Into watercourses</i>	59.500	58.348	98
U akumulacije <i>Into reservoirs</i>	430	430	100
Prečišćene vode – svega <i>Refinement waters – total</i>	<b>3.028</b>	<b>2.871</b>	<b>95</b>
Ispuštene <i>Discharged</i>			
U podzemne vode <i>Into ground waters</i>	157	80	51
U vodotoke <i>Into watercourses</i>	2.431	2.359	97
U more <i>Into the sea</i>	440	432	98

**2. KANALIZACIONA MREŽA**  
SEWERAGE NETWORK

	2012	2013	Indeksi/indices <u>2013</u> 2012
Ukupna dužina zatvorene kanalizacione mreže, km <i>Total length of sewage network, km</i>	2.692	2.734	102
Od toga prema vrsti: <i>Of that, by type:</i>			
Mješoviti sistem, km <i>General system, km</i>	1.172	1.179	101
Separacijski sistem, km <i>Separation system, km</i>	1.520	1.555	102
Od toga: <i>Of that:</i>			
Fekalni, km <i>Faecal, km</i>	989	1.014	103
Atmosferski, km <i>Atmospheric, km</i>	531	541	102
Dužina glavnoga kolektora, km <i>The length of the main sewer, km</i>	477	480	101
Broj kanalizacionih priključaka <i>Number of sewage connections</i>	178.270	182.470	102



## METODOLOŠKA OBJAŠNENJA

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 BPK<sub>5</sub> ulaznih otpadnih voda reducira za najmanje 20% prije ispuštanja, a ukupne suspendirane tvari ulaznih otpadnih voda se reducira za najmanje 50%.

Sekundarni tretman je primjena bioloških i/ili drugih postupaka čišćenja kojima se u otpadnim vodama smanjuje koncentracija suspendirane tvari i BPK<sub>5</sub> 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

BPK<sub>5</sub> biološka potreba kisika  
KPK hemijska potreba kisika

## NOTES OF METHODOLOGY

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 BOD<sub>5</sub> 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 BOD<sub>5</sub> 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

BOD<sub>5</sub> biochemical oxygen demand  
COD chemical oxygen demand