

## JAVNA ODVODNJA U 2020. PUBLIC SEWAGE SYSTEM, 2020

U 2020. ukupna količina otpadnih voda iznosila je 356 149 tis. m<sup>3</sup>, što je smanjenje za 1,4% u odnosu na 2019.

*In 2020, the total volume of waste waters amounted to 356 149 thousand m<sup>3</sup>, which means it decreased by 1.4% compared to 2019.*

Od ukupne količine otpadnih voda, 189 535 tis. m<sup>3</sup> činile su vode iz kućanstava i gospodarskih djelatnosti (smanjenje za 2,3%), dok se 166 614 tis. m<sup>3</sup> odnosilo na ostale vode (oborinske vode i dr.).

*Out of the total volume of waste waters, 189 535 thousand m<sup>3</sup> were from households and economic activities (decrease of 2.3%), while 166 614 thousand m<sup>3</sup> were other waste waters (precipitations, etc.).*

Ispuštanje otpadnih voda bilježi smanjenje za 1,2% iz kućanstava te 4,5% iz gospodarskih djelatnosti u odnosu na prethodnu godinu.

*The volume of waste waters discharged from households decreased by 1.2%, while in economic activities, it decreased by 4.5% compared to the previous year.*

Pročišćenih otpadnih voda u 2020. bilo je 298 182 tis. m<sup>3</sup>, što je za 1,1% manje od ukupne količine pročišćenih otpadnih voda u 2019.

*In 2020, there were 298 182 thousand m<sup>3</sup> of treated waste waters, which was 1.1% less than the total volume of waste waters in 2019.*

Nepročišćenih otpadnih voda je bilo 57 967 tis. m<sup>3</sup>, što je za 3,3% manje u odnosu na prethodnu godinu.

*Untreated waste waters amounted to 57 967 thousand m<sup>3</sup>, which was 3.3% less than in the previous year.*

Mreža javne odvodnje u 2020. iznosila je 13 453 km, što je za 2,2% više u odnosu na 2019.

*The public sewage network in 2020 was 13 453 km long, which was 2.2% more than in 2019.*

Ukupan broj uređaja za pročišćavanje otpadnih voda u 2020. iznosi 174. Broj uređaja za prvostupanjsko pročišćavanje povećao se za 10,2%, a za drugostupanjsko pročišćavanje za 1,1%.

*The total number of waste water treatment plants was 174 in 2020. The number of primary treatment plants increased by 10.2% and of secondary treatment plants by 1.1%.*

Detaljniji podaci biti će dostupni 23. srpnja 2021. u bazi podataka.

*More detailed data will be available in the database on 23 July 2021.*

### 1. PODRIJETLO, PROČIŠĆAVANJE I ISPUŠTANJE OTPADNIH VODA U 2019. I 2020. SOURCE, TREATMENT AND DISCHARGE OF WASTE WATERS, 2019 AND 2020

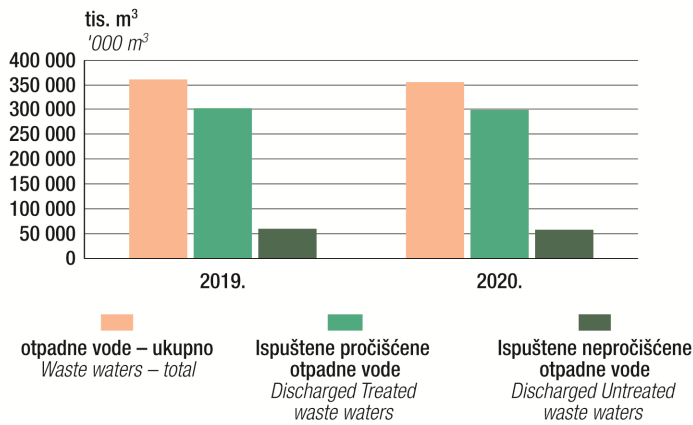
	2019.	2020.	Indeksi Indices <u>2020</u> 2019.	
Otpadne vode – ukupno	361 359	356 149	98,6	Waste waters discharge – total
Iz kućanstava	128 353	126 843	98,8	From households
Iz gospodarskih djelatnosti	65 667	62 692	95,5	From economic activities
Ostale vode	167 339	166 614	99,6	Other waters
Ispuštene pročišćene otpadne vode – ukupno	301 436	298 182	98,9	Discharged treated waste waters – total
Prvostupanjski	74 759	70 202	93,9	Primary treatment
Drugostupanjski	200 468	199 940	99,7	Secondary treatment
Trećestupanjski	26 209	28 040	107,0	Tertiary treatment
Ispuštene nepročišćene otpadne vode	59 923	57 967	96,7	Discharged untreated waste waters

tis. m<sup>3</sup>  
'000 m<sup>3</sup>

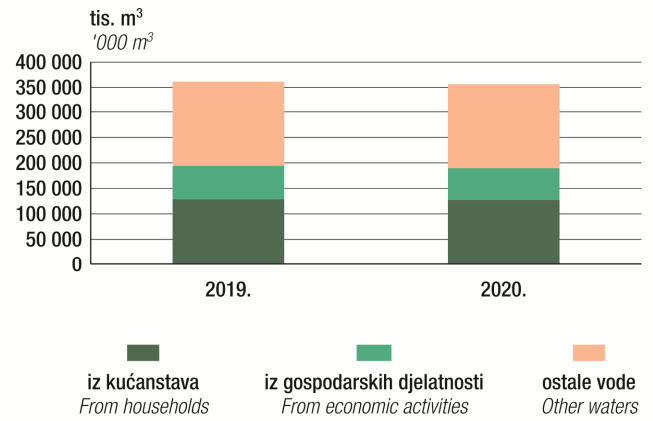
### 2. MREŽA JAVNE ODVODNJE I UREĐAJI ZA PROČIŠĆAVANJE OTPADNIH VODA U 2019. I 2020. PUBLIC SEWAGE NETWORK AND WASTE WATER TREATMENT PLANTS, 2019 AND 2020

	2019.	2020.	Indeksi Indices <u>2020</u> 2019.	
Ukupna duljina mreže javne odvodnje, km	13 168	13 453	102,2	Total length of public sewage network, km
Uređaji za pročišćavanje otpadnih voda	166	174	104,8	Waste water treatment plants
Broj uređaja za prvostupanjsko pročišćavanje	59	65	110,2	Number of primary treatment plants
Broj uređaja za drugostupanjsko pročišćavanje	87	88	101,1	Number of secondary treatment plants
Broj uređaja za trećestupanjsko pročišćavanje	20	21	105,0	Number of tertiary treatment plants

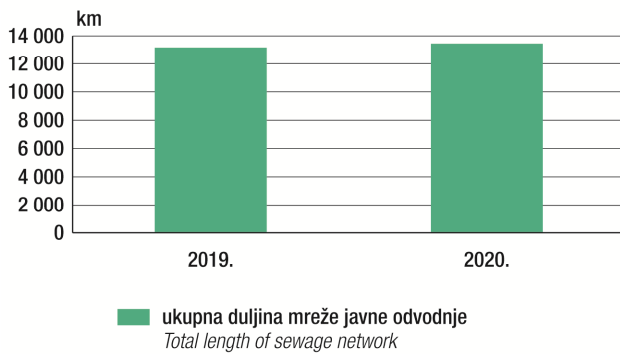
**G-1. OTPADNE VODE U 2019. I 2020.**  
WASTE WATERS, 2019 AND 2020



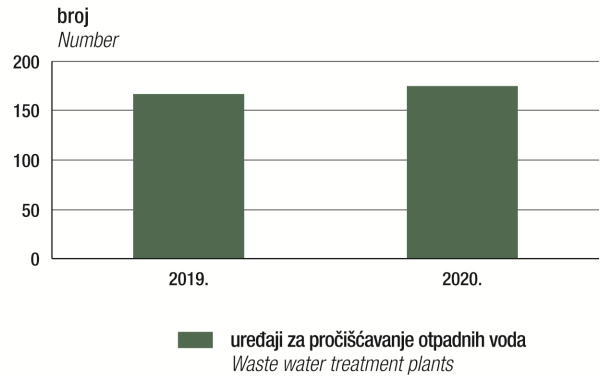
**G-2. OTPADNE VODE 2019. I 2020. PREMA PODRIJETLU**  
WASTE WATERS, BY ORIGIN, 2019 AND 2020



**G-3. MREŽA JAVNE ODVODNJE U 2019. I 2020.**  
SEWAGE NETWORK, 2019 AND 2020



**G-4. UREĐAJI ZA PROČIŠĆAVANJE OTPADNIH VODA U 2019. I 2020.**  
WATER TREATMENT PLANTS, 2019 AND 2020



## METODOLOŠKA OBJAŠNJENJA

### Izvori i metode prikupljanja podataka

Podaci o javnoj odvodnji prikupljaju se godišnjim statističkim istraživanjem Godišnji izvještaj o javnoj odvodnji (obrazac VOD-2K) na temelju Zakona o službenoj statistici (NN, br. 25/20.).

Izveštajne jedinice jesu javni isporučitelj vodnih usluga javne odvodnje. Prema Zakonu o vodama (NN, br. 66/19.), javni isporučitelj vodnih usluga javne odvodnje jest trgovačko društvo u kojem sve udjele, odnosno dionice u temeljnom kapitalu imaju jedinice lokalne samouprave ili trgovačka društva u kojima sve udjele, odnosno dionice u temeljnom kapitalu izravno imaju jedinice lokalne samouprave, odnosno ustanova kojoj je osnivač jedinica lokalne samouprave.

Izveštaj popunjavaju pravne osobe i dijelovi pravnih osoba koji su prema NKD-u 2007. (NN, br. 58/07. i 72/07.) registrirani u području E Opskrba vodom; uklanjanje otpadnih voda, gospodarenje otpadom te djelatnosti sanacije okoliša, razred 37.00 Uklanjanje otpadnih voda.

### Obuhvat i usporedivost

Izvor za izradu adresara jest Statistički poslovni registar.

Istraživanjem se dobivaju osnovni podaci o otpadnim vodama, njihovu pročišćavanju i ispuštanju te o mreži javne odvodnje i uređajima za pročišćavanje otpadnih voda.

## NOTES ON METHODOLOGY

### Sources and methods of data collection

The data on the public sewage system are collected by using the annual statistical survey entitled the Annual Survey on Public Sewage System (VOD-2K form) on the basis of the Official Statistics Act (NN, No. 25/20.).

Reporting units are public suppliers of public sewage system services. According to the Water Act (NN, No. 66/19), the public supplier of sewage system services is a company in which all shares or equity shares are held by local self-government units or companies in which all shares or equity shares are held directly by local self-government units, that is, an institution founded by a local self-government unit.

The report is filled in by legal entities and parts thereof that are registered, according to the NKD 2007. (NN, Nos 58/07 and 72/07), in section E Water supply; sewerage, waste management and remediation activities, class 37.00 Sewerage.

### Coverage and comparability

The source for the address list is the Statistical Business Register.

The survey provides basic data on waste waters, their treatment and discharge as well as on the public sewerage network and waste water treatment plants.

## Definicije

**Javna odvodnja** jest djelatnost skupljanja otpadnih voda, njihova dovođenja do uređaja za pročišćavanje, pročišćavanja i izravnoga ili neizravnoga ispuštanja u površinske vode, obrade mulja koji nastaje u procesu njihova pročišćavanja, ako se ti poslovi obavljaju putem građevina javne odvodnje te upravljanje tim građevinama; javna odvodnja uključuje i pražnjenje i odvoz otpadnih voda iz sabirnih jama.

**Otpadne vode** jesu sve potencijalno onečišćene industrijske, sanitarne, oborinske i druge vode.

**Pročišćene otpadne vode** jesu dio otpadnih voda koji se pročišćava prvostupanjski, drugostupanjski i trećestupanjski.

**Prvi stupanj pročišćavanja** jest primjena fizikalnih i/ili kemijskih postupaka čišćenja otpadnih voda kojima se iz otpadnih voda uklanja najmanje 50% suspendirane tvari, a vrijednost BPK<sub>5</sub> smanjuje barem za 20% u odnosu na vrijednosti BPK<sub>5</sub> u ulaznim vodama (influenta).

**Drugi stupanj pročišćavanja** jest 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%.

**Treći stupanj pročišćavanja** jest primjena fizikalno-kemijskih, 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 pročišćavanja.

**Ispuštene otpadne vode** sastoje se od ispuštenih pročišćenih i nepročišćenih voda. Vode se mogu ispuštati u podzemne vode, vodotoke, akumulacije, jezera i more.

**Mreža javne odvodnje** jest mreža zatvorenih uličnih kanala i kolektora koja služi za zajedničko odvođenje otpadnih i atmosferskih voda (opći sustav) ili kao posebna mreža za odvođenje otpadnih voda, a posebno za odvođenje atmosferskih voda (separacijski sustav).

**Ukupna duljina mreže javne odvodnje** jest duljina zatvorenih uličnih kanala odnosno cijevi za odvođenje otpadnih i atmosferskih voda iz naselja, bez priključaka i mreže po kućama.

**Uređaji za pročišćavanje otpadnih voda** jesu uređaji kojima se tretiraju otpadne vode. Dije se na uređaje za prvostupanjsko, drugostupanjsko i trećestupanjsko pročišćavanje.

## Kratice

BPK <sub>5</sub>	biološka potrošnja kisika
km	kilometar
KPK	kemijska potrošnja kisika
m <sup>3</sup>	kubični metar
NKD 2007.	Nacionalna klasifikacija djelatnosti, verzija 2007.
NN	Narodne novine
tis.	tisuća

## Definitions

**Public sewerage** means the activity of collection of waste waters, their transport to a waste water treatment plant, treatment and direct or indirect discharge into surface waters, treatment of sludge generated in the process of waste water treatment, if the above is conducted through public sewerage facilities, and management of these facilities; public sewerage also includes pumping and transport of waste water from sump pits.

**Waste waters** are all potentially polluted industrial, sanitary, rainwater and other waters.

**Treated waste waters** comprise all amounts of waste waters treated by using either primary (mechanical), secondary (biological) or tertiary (combined) treatment method.

**The primary treatment** includes the application of physical and/or chemical processes by which at least 50% of suspended solids are removed from the waste water, while the BOD<sub>5</sub> value decreases by as much as 20%, as compared to its value in the influent waters.

**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 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.

**Discharged waste waters** consist of discharges of treated and untreated waters. The waters can be discharged into ground waters, waterflows, reservoirs, lakes and the sea.

**Public sewage network** is a network of enclosed public drains and sewers used either for draining of both waste and atmospheric waters together (general water sewage system), or for separate draining of waste and atmospheric waters (separation water sewage system).

**Total length of the public sewage network** is the length of the sewerage network of enclosed public drains and pipes for wastewater and atmospheric waters from settlements, without connections and networks within buildings.

**Waste water treatment plants** are devices for the treatment of waste water. They are divided to devices for the primary, secondary and tertiary treatment.

## Abbreviations

BOD <sub>5</sub>	biochemical oxygen demand
COD	chemical oxygen demand
km	kilometre
m <sup>3</sup>	cubic metre
NKD 2007.	National Classification of Activities, 2007 version
NN	Narodne novine, official gazette of the Republic of Croatia
'000	thousand

Objavljuje Državni zavod za statistiku Republike Hrvatske, Zagreb, Ilica 3, p. p. 80.

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