|  |  |  |
| --- | --- | --- |
|  |  | **Questionnaire VOD-2V and VOD-2K** |
| REPUBLIC OF SERBIA |  | Law on Official Statistics,”Official Gazette”, No 104/2009 |
| Statistical Office of the Republic of Serbia |  |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |  | Code of the survey: 011020 |
|  |  |  |  |  |  |  |  |  |  |  | Code of the survey: 011030 |

 **SURVEY**

on drinking water supply and urban wastewater in 2017

 The obligation for provide data is laid down in Article 26, and penalty provisions in Article 52 of the Law on Official Statistics (“Official Gazette of RS“, No 104/2009).

**Data will be used for statistical purposes only and will not be published in form of individual data. All data are subject to confidentiality.**

**This questionnaire can be Filled in electronically. The electronic form is available at: pod2.stat.gov.rs/unos or [www.stat.gov.rs](http://www.stat.gov.rs/) (part quick links) or [www.euprava.gov.rs.](http://www.euprava.gov.rs/)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **DATA ON THE REPORTING UNIT:** |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **1. Company name** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | (name of the part of the legal person – incorporated local units) |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **2. Registration number** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Sequence number of the part of the legal person - incorporated local units |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **3. Tax identification number** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **4. Activity** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **5. Municipality** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Settlement |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | (place) |  |  |  |  |  |  |  |  | Тelephone |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Address |  |  |  |  |  |  |  |  |  | Street number |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **6. Total number of settlements with:** | Public water supply system |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  | Urban wastewater collecting system |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **7. Type of water supply system** | 1. municipal/local, 2. inter-municipality |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **8. Type of wastewater collecting system** | 1. municipal/local, 2. inter-municipality |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **9. Method of water transport:** | 1. gravitation, 2. pressure, 3. combined  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **10. Method of wastewater transport:** | 1. gravitation, 2. pressure, 3. combination |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Sequence number of the regional office** | (To be filled in by statistics) |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Sequence number (of the form) from the address book** | (To be filled in by statistics) |  |  |  |  |

|  |
| --- |
| Remark*:* |

on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2018

|  |  |  |
| --- | --- | --- |
| Questionnaire filled in by: |  | Head: |
| (first and last name) |  | (first and last name) |
| Contact phone: |  |  |  |  | / |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | (call sign required) |  |  |  |  |  |  |  |  |  |  |  |
| e–mail |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Printed in the Statistical office of the Republic of Serbia

[www.stat.gov.rs](http://www.stat.gov.rs/)

**Drinking water supply for 2017 – Questionnaire VOD-2V**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |

|  |
| --- |
| **Таble 1 Water abstraction source, abstracted (fresh water), assumed and submited water by other water supply** |
| Sequence number |   | Water abstraction source | Water quantity, thous. m3 |
| Name/location | Code/registration number |
| 1 | 2 | 3 |
| 1 | Total water1) (2+19+20+21-22-23-24-25-26-27)  | xxxxxxxxxxx | xxxxxxxxxxx |   |
| 2 | Total water abstracted (3+…+18)  | xxxxxxxxxxx | xxxxxxxxxxx |   |
| 3 | Settlements from which territories water is abstracted | Underground water |   |   |   |
| 4 |   |   |   |
| 5 |   |   |   |
| 6 |   |   |   |
| 7 |  |  |  |  |
| 8 |  |  |  |  |
| 9 | Spring water |   |   |   |
| 10 |   |   |   |
| 11 |   |   |   |
| 12 |  |  |  |
| 13 |  |  |  |
| 14 |   |   |   |
| 15 | Rivers |   |   |   |
| 16 | Accumulation |   |   |   |
| 17 |   |   |   |
| 18 | Lake |   |   |   |
| 19 | Water assumption from other water supply |  |  |  |
| 20 |  |  |  |
| 21 |  |  |  |
| 22 | Water submission by other water supply |   |   |   |
| 23 |  |  |  |
| 24 |  |  |  |
| 25 |  |  |  |
| 26 |  |  |  |
| 27 |  |  |  |
| 1) The row 1 in table 1 (total water) = Row 1 column 2 from table2 (total distributed water) + row 13 column 2 from table 2 (total water losses). |

**Table 2 Total distributed water and water losses**

|  |  |  |  |
| --- | --- | --- | --- |
| Sequence number |  | Number of enterprises | Water quantity,thous. m3  |
| 1 | 2 |
| 1 | Total distributed water (2+3+11) |  |   |
| 2 | Households | xxxxxxxxxx |  |
| 3 | Enterprises – total (4+5+6+7+8+9+10) |  |  |
| 4 | In sector: Agriculture, forestry and fishing |   |   |
| 5 | In sector: Mining |  |  |
| 6 | In sector: Manufacturing |  |  |
| 7 | In sector: Electricity, gas, steam and air conditioning supply |  |  |
| 8 | In sector: Collect , treatment and disposal waste |  |  |
| 9 | In sector: Constraction |  |  |
| 10 |  Other consumers: schools, institutions, stores,hospitals, hotels, etc. |   |   |
| 11 | Water for own consumption | xxxxxxxxxx |   |
| 12 |  of which: sanitary water | xxxxxxxxxx |   |
| 13 | Total water losses at network  | xxxxxxxxxx |   |

|  |
| --- |
|  |
|  |  |  |  |  |
|  |  |  |

**Drinking water supply for 2017 – Questionnaire VOD-2V**

|  |
| --- |
| **Table 3 Water treatment, water supply network, users and costs for the production of drinking water** |
| 1 | Fresh water pumps | Number |  |
| 2 | Total operational power, kW |  |
| 3 | **Drinking water treatment plant** | Maximum designed capacity2), (m3/h or l/s) |  |
| 4 | Used capacity2), (m3/h or l/s)  |  |
| 5 | Facilities within the plant | Coagulation Chambers | Number |  |
| 6 | m3 |  |
| 7 | Flocculation Chambers | Number |  |
| 8 | m3 |  |
| 9 | Precipitators | Number |  |
| 10 | m3 |  |
| 11 | Ozonation 3) | Ozonation Chambers | Number |  |
| 12 | m3 |  |
| 13 | Ozone generator | Number |  |
| 14 | Quantity of produced ozone, kg/h  |  |
| 15 | Filtration | Filters | Number |  |
| 16 | m2 |  |
| 17 | Filter type | (open, closed) |  |
| 18 | Type of fulfill filters | (sand, active carbon) |  |
| 19 | Disinfection3) | UV-reactor | Total power, kW |  |
| 20 | Chlorinators | Number |  |
| 21 | Chlorine consumption , kg/h |  |
| 22 | Deferization system | Filters number |  |
| 23 | Capacity, l/s |  |
| 24 | Other devices4)  ………………………………………………………… | 2) |  |
| 25 | 2) |  |
| 26 | Drinking water reservoir | Number |  |
| 27 | m3 |  |
| 28 | Drinking water pumps | Number |  |
| 29 | Total operational power, kW |  |
| 30 | Length of main pipe | km |  |
| 31 | Length of the distributive network | km |  |
| 32 | Number of water connections pipes | xxxxxxxx |  |
| 33 | Number of street hydrants | xxxxxxxx |  |
| 34 | Number of public fountains connected to water supply network | xxxxxxxx |  |
| 35 | Number of households connected to water supply network | xxxxxxxx |  |
| 36 | Population connected to water supply network | xxxxxxxx |  |
| 37 | Total costs for the production of drinking water, VAT included | thous. RSD |  |
|  |
| 2) Enter the production unit.3) If the process involves processing or pre-ozonization and pre-oxidation, enter the total number and capacity of the devices.4) Enter the exact name of the device. |

**Urban wastewater for 2017 – Questionnaire VOD–2K**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |

|  |
| --- |
| **Таble 1 Wastewater discharged in water bodies** |
| Sequence number  | Water body | Wastewater discharged (thous. m3) |
| untreated water | treated water | total wastewater discharged |
|  | name-location | code/registration number5) | primary treatment(physical/ chemical) | secondary treatment(physical/ biological) | tertiary treatment(physical/chemical/ biological) |
|  |  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | Total (2+...+11) | xxxxxxxxxx | xxxxxxxxxxx |   |   |   |   |   |
| 2 | Country/ settlement | 1 |   |   |   |   |   |   |   |
| 3 | 2 |   |   |   |   |   |   |   |
| 4 | 3 |   |   |   |   |   |   |   |
| 5 | River | 1 |   |   |   |   |   |   |   |
| 6 | 2 |   |   |   |   |   |   |   |
| 7 | 3 |   |   |   |   |   |   |   |
| 8 | Accumulation | 1 |   |   |   |   |   |   |   |
| 9 | 2 |   |   |   |   |   |   |   |
| 10 | Lake | 1 |   |   |   |   |   |   |   |
| 11 | Other Urban wastewater collecting system | 1 | xxxxxxxxxx | xxxxxxxxxxx |  |  |  |  |  |
| 12 |  Surface runoff | xxxxxxxxxx | xxxxxxxxxxx |   |   |   |   |   |
| 13 | Removale from cesspool | xxxxxxxxxx | xxxxxxxxxxx |  |  |  |  |  |
| 5) To be filled in by statistics. |

|  |
| --- |
| **Тable 2 Devices for wastewater treatment** |
| Seque-nce number | Type of treatment | Primary treatment (physical/ chemical) | Secondary treatment (physical/biological) | Tertiary treatment(physical/ chemical/ biological) |
| Designed capacity of the device | Realized capacity of the device | Effluent | Designed capacity of the device | Realized capacity of the device | Effluent | Designed capacity of the device | Realized capacity of the device | Effluent |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1 | Hydraulic load - water flow, m3/day |  |  |  |  |  |  |  |  |  |
| 2 | E.C.7) |  |  |  |  |  |  |  |  |  |
| 3 | COD, kg О2/day |  |  |  |  |  |  |  |  |  |
| 4 | Suspended particles, kg О2/ day |  |  |  |  |  |  |  |  |  |
| 5 | Nitrogen, total mg/l |  |  |  |  |  |  |  |  |  |
| 6 | Phosphorus, total mg/l |  |  |  |  |  |  |  |  |  |

7) Population equivalent

**Urban wastewater for 2017 – Questionnaire VOD–2K**

|  |
| --- |
| **Таble 3 Wastewater by source of generation** |
| Sequence number |   | Number of enterprises | Quantities of water, thous. m3 | Of which: Treated wastewater |
| 1 | Total (2+3+11) |   |   |  |
| 2 | From household | xxxxxxxxxxx |   |  |
| 3 | Enterprises – total (4+5+6+7+8+9+10) |  |  |  |
| 4 | from sector: Agriculture, forestry and fishing |   |   |  |
| 5 | from sector: Mining |  |  |  |
| 6 | from sector: Manufacturing |   |   |  |
| 7 | from sector: Electricity, gas, steam and air conditioning supply |  |  |  |
| 8 | from sector: Collect , treatment and disposal waste |  |  |  |
| 9 | from sector: Constraction |  |  |  |
| 10 | Other consumers: schools, institutions, stores,hospitals, hotels, etc. |   |   |  |
| 11 | From own consumption | xxxxxxxxxxx |   |  |

|  |
| --- |
| **Таble 4 Sewage network and costs for wastewater treatment**  |
| Sequence number |  |   |
| 1 | Total length of the sewage network, km |   |
| 2 | Length of the main collector, km |   |
| 3 | Number of sewer connections |  |
| 4 | Number of households connected to the wastewater collecting system |  |
| 5 | Population connected to the wastewater collecting system |  |
| 6 | Number of households with cesspool |  |
| 7 | Total costs for wastewater treatment, VAT included, thous. RSD  |   |

**Table 6. List of all settlements covered by the public water supply and urban wastewater collecting systems; quantities of distributed and discharged water**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sequen ce number | Name of the settlement | Number of households conn. to public water supply | Total distributed water thous. m3 | Number of households conn. to urban wastewater coll. system | Total wastewater discharged thous. m3 | Sequen ce number | Name of the settlement | Number of households conn. to public water supply | Total distributed water thous. m3 | Number of households conn. to urban wastewater coll. system | Total wastewater discharged thous. m3 |
| 1 |   |   |   |  |   | 16 |   |  |   |   |   |
| 2 |   |   |   |  |   | 17 |   |  |   |   |   |
| 3 |   |   |   |  |   | 18 |   |  |   |   |   |
| 4 |   |   |   |  |   | 19 |   |  |   |   |   |
| 5 |   |   |   |  |   | 20 |   |  |   |   |   |
| 6 |   |   |   |  |   | 21 |   |  |   |   |   |
| 7 |   |   |   |  |   | 22 |   |  |   |   |   |
| 8 |   |   |   |  |   | 23 |   |  |   |   |   |
| 9 |   |   |   |  |   | 24 |   |  |   |   |   |
| 10 |   |   |   |  |   | 25 |   |  |   |   |   |
| 11 |   |   |   |  |   | 26 |   |  |   |   |   |
| 12 |   |   |   |  |   | 27 |   |  |   |   |   |
| 13 |   |   |   |  |   | 28 |   |  |   |   |   |
| 14 |   |   |   |  |   | 29 |   |  |   |   |   |
| 15 |   |   |   |  |   | 30 |   |  |   |   |   |

EXPLANATORY NOTES

On how to fill in the questionnaires for the Annual Survey on Drinking water supply, **Vod-2v** and Annual Survey on Urban wastewater, **Vod-2k**.

**Vod-2V**

Data for all the tables are provided for the municipality on which territory the water abstraction source is.

**Таble 1 - Water abstracted (fresh water), assumed and submited water by other water supply** – the name/location and code/registration number of the water abstraction source or other water supply, i.e. quantities of abstracted, assumed and submitted water are to be recorded.

**Тable 2 – Distributed water and losses**

**Column 1 –** the number of enterprises to which water has been distributed or sold is to be recorded.

**Column 2 –** are to be recorded the quantities of water distributed to households, enterprises, registered for performing activities in the sectors: Agriculture, forestry and fishing (according to CA8) divisions 01-03), Mining (according to CA8) divisions 04-09), Manufacturing (according to CA8) divisions 10-33), Electricity, gas, steam and air conditioning supply (according to CA8) divisions 35), Collect , treatment and disposal waste (according to CA8) divisions 38), Construction (according to CA8) divisions 41-43) other enterprises which are engaged in service activities (according to CA8) divisions 45-96), water consumed for own consumption (washing and maintenance of pools, pumps, filters), as well as the total water losses.

**Column 5 –** the average price of water including VAT (RSD / m3) distributed to consumers.

**Table 3** - **Water treatment, water supply network, users and costs for the production of drinking water**

This table should contain data on: water treatment plant and its facilities, length of main water supply and distributive network, number of water connections pipes, number of street hydrants, public fountains, number of households and population connected to water supply network, as well as total costs for drinking water production (excluding investment costs).

**Vod-2К**

**Table 1 - Wastewater discharged in water bodies**

**Primary treatment** of wastewater by physical and/or chemical processes includes the collection of suspended particles and by other processes where BOD59) is reduced at least by 20% before the discharge, and the total suspended particle of incoming wastewater by at least 50%.

**Secondary treatment** of wastewater includes the biological treatment by secondary collection which BOD59) result is a reduction of at least 70% and COD10) at least up to 75%.

**Теrtiary treatment** is the continuation of the secondary treatment of nitrogen and/or phosphorous and/or of other pollutant that affects the quality and specifically water consumption: microbiological pollution, color, etc. Minimal levels of efficiency that define tertiary treatment are: organic pollution reduced at least up to 95% as for BOD59) and 85% as for COD10): nitrogen removal by at least 80% and microbiological removal until coliform density under 1000 in 100 ml is reached.

The wastewater treatment method shown in table 1 indicates the required type of water treatment device.

**Тable 2 - Devices for wastewater treatment –** contain data on the number and capacity of wastewater treatment plant and quality of wastewater before and after treatment in E.C11) and/or m3/h.

**Table 3 - Biological and chemical oxygen demand and quantity of heavy metals in wastewaters**

**Effluent** relates to technological wastewaters that are, as treated or untreated, discharged into public sewerage systems or surface waters, as well as wastewaters from public sewerage systems that are discharged into surface waters as treated or untreated.

Column 1. Indicate quantity of effluent untreated wastewater discharged into public sewage system for BOD, COD, suspended soils in terms of kg O2/day and quantities of heavy metals in terms of mg/l.

Column 2. Indicate quantity of effluent treated wastewater discharged into public sewage system for BOD, COD, suspended soils in terms of kg O2/day and quantities of heavy metals in terms of mg/l.

**Тable 4 - Wastewater by source of generation**

**Column 1** the number of enterprises which discharge wastewater is to be recorded here.

**Column 2** The quantities of water discharged by households, enterprises, registered for performing activities in the sectors: Agriculture, forestry and fishing (according to CA8) divisions 01-03), Mining (according to CA8) divisions 04-09), Manufacturing (according to CA8) divisions 10-33), Electricity, gas, steam and air conditioning supply (according to CA8) divisions 35), Collect, treatment and disposal waste (according to CA8) divisions 38), Construction (according to CA8) divisions 41-43), other enterprises which are engaged in service activities (according to CA8) divisions 45-96), wastewater consumed for own consumption (washing and maintenance of pools, pumps, filters).

**Тable 5 Sewerage network and costs for wastewater treatment**

This table presents data on the length of the sewerage network and main collector, number of households and population connected to the wastewater collecting system, number of households with cesspool, as well as on the total costs for wastewater treatment (including the cost of sewerage network maintenance, excluding the investment assets).

E-form of the questionnaire with instructions and methodological explanation are available on the website of the Statistical Office: [www.stat.gov.rs](http://www.stat.gov.rs).

8) CA – Classificaton of activities

9) BOD5 - Biological Oxygen Demand after five days

10) COD - Chemical Oxygen Demand in KMnO4

11) One population equivalent (P.E.) means the organic biodegradable load having a five-day biochemical oxygen demand (BOD5) of 60 g of oxygen per a day.