

Code of the survey: 011010

## SURVEY ON WATER USE AND PROTECTION AGAINST POLLUTION FOR 2012

The obligation to 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 104/09).

Data will be used for statistical purposes only and will not be published in form of individual data.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

### Data on the reporting unit:

1. Company name \_\_\_\_\_

\_\_\_\_\_  
(name of the legal person – local incorporated unit)

2. Registration number \_\_\_\_\_

Sequence number of the part of the legal person -local incorporated unit \_\_\_\_\_

3. Tax identification number \_\_\_\_\_

4. Activity \_\_\_\_\_

5. Municipality \_\_\_\_\_

Settlement \_\_\_\_\_ Phone number \_\_\_\_\_

Address \_\_\_\_\_ Street number \_\_\_\_\_

Sequence number of the regional office \_\_\_\_\_

Sequence number of the questionnaire from the address book \_\_\_\_\_

Remarks:

on \_\_\_\_\_ 2013

Filled in by:

Head:

\_\_\_\_\_  
(first and last name)

(seal)

\_\_\_\_\_  
(first and last name)

Contact person: \_\_\_\_\_ / \_\_\_\_\_  
(call sign requested)

E – mail \_\_\_\_\_

**Table 1. WATER ABSTRACTION AND SUPPLY IN 2012**

		Name of the settlement where the water abstraction source is /name of the river, basin or public utilities company	Registration number of the settlement/public utilities company or code of the rivers/basins (to be filled by statistics)	Abstracted water (thous. m <sup>3</sup> )
1.	Own abstractions	Underground waters		
		Spring waters		
		From rivers		
		From basins		
<b>2. From public water supply</b>				
<b>TOTAL ABSTRACTED WATER QUANTITIES</b>		xxx	xxx	
<b>Water losses</b>		xxx	xxx	

**Table 2. Water use, thous. m<sup>3</sup>**

		Cooling waters		Flowing waters in hydropower plants	Water used in the production process		Sanitary waters (for drinking and personal hygiene)	Use for other purposes (transport of raw materials, washing and maintenance of devices and production sections)	Total (1+2+3+4+6+7)
		For electricity generation	Others		Total	Of which: product-related			
1. Own abstractions	Underground waters			xxx					
	Spring waters			xxx					
	From rivers								
	From basins								
<b>2. From public water supply</b>		xxx		xxx					
<b>TOTAL ABSTRACTED WATER QUANTITIES</b>									

**Table 3. Recirculating waters, thous. m<sup>3</sup>**

	Fresh waters added					
	All	Underground waters	Spring waters	From rivers	From basins	From public water supply
	1	2	3	4	5	6
<b>Total</b>						
Cooling waters						
Water in district heating systems						
Sanitary hot water						

**Table 4. Wastewater discharge, thous. m<sup>3</sup>**

		Name of the settlement where the water abstraction source is /name of the river, basin or public utilities company	Registration number of the settlement/public utilities company or code of the watercourse/accumulation (to be filled by statistics)	Wastewater discharged					Total (3+5+6+7)
				Non treated		Treated			
				total	Of which: recycled water discharged	Primary treatment (physical/chemical)	Secondary treatment (physical/biological)	Tertiary (physical/chemical/biological)	
		1	2	3	4	5	6	7	8
1.	Own abstraction	In the country (lagoons and septic tanks)							
		In rivers							
		In basins							
<b>2. In public sewerage system</b>									
<b>TOTAL WASTEWATER QUANTITIES</b>		xxx	xxx						

**Table 5. Devices for wastewater treatment**

	Ownership over the device	Number of devices	Designed capacity of the device		Realized capacity of the device		Effluent, BOD, kg O <sub>2</sub> /day
	1. owner		m <sup>3</sup> /day	kg O <sub>2</sub> /day	m <sup>3</sup> /day	kg O <sub>2</sub> /day	
	2. co-owner						
	3. rented						
	1	2	3	4	5	6	7
Primary treatment (physical/chemical)							
Secondary treatment (physical/biological)							
Tertiary treatment (physical/biological)							
<b>Total</b>	xxx						

**Primary treatment of waste waters** by physical and/or chemical procedure includes the collection of suspended particles, and other processes in which BOD is reduced to at least 20% before being discharged. It also covers the total suspended particles of incoming wastewaters reduced to at least 50%.

**Secondary treatment of wastewaters** include biological treatment with secondary collection or by other by other processes, which result as to COD is a reduction of at least 70% and as to COD a reduction of at least under 75%.

**Tertiary treatment** is the next wastewater treatment process after the secondary treatment of nitrogen and/or phosphorous and/or any other pollutant affecting the quality and specifically the use of water: microbiological pollution reduced up to at least 95% for BOD and 85% for COD, being: at least 70% nitrogen removal, at least 80% phosphorous removal and microbiological removal until a coliform density of 1000 in 100 ml is reached.

**If treated wastewaters are reused, enter the quantities in table 6.**

**Table 6. Reused water**

Purpose	Reused water, thous. m <sup>3</sup>
<b>Total</b>	
Cooling waters	
For sanitary purposes	
Transport of raw materials	
Washing and maintenance of devices and production sections	
Other (specify)	

**Table 7. Biological and chemical oxygen demand and quantity of heavy metals in wastewaters**

	kg/day
Biological oxygen demand (BOD) <sub>5</sub>	
Chemical oxygen demand (COD)	
Suspended particles, total	
Nitrogen, total	
Phosphorus, total	
Arsenic	
Cadmium	
Mercury	
Copper	
Chromium	
Nickel	
Lead	
Zinc	
Other (specify)	

**Table 8. Costs for water and transport of wastewater**

	RSD		
	Total (2+3)	Abstracted/purchased	Wastewater
	1	2	3
Costs for water purchased from public water supply system and wastewater transport			
Price of water purchased from public water supply system (VAT included), RSD/m <sup>3</sup>			
Price of wastewater transport to public sewerage system (VAT included), RSD/m <sup>3</sup>			

## INSTRUCTION for completing questionnaire VOD - 1

The questionnaire VOD-1 is to be filled in by all enterprises which, according to the Law on the Classification of Activities, fall under the sections Mining and quarrying, Manufacturing and Electricity, gas, steam and air conditioning supply.

### TABLE 1. WATER ABSTRACTION AND SUPPLY

**ROW 1.** Own water abstraction source owned by the enterprise or the local incorporated units which fill in the questionnaire.

**ROW 2.** Data on public water supply system and total quantities of water bought from public water supply system are to be recorded.

**Total quantities of abstracted water** are obtained by adding up the quantities of waters from own abstraction source and from public water supply system.

**COLUMN 1.** Indicate the name of the settlement on which territory the water abstraction source for underground/or spring waters is located; the name of the river and basin from which water is abstracted; the name of the public water supply system from which water is purchased.

**COLUMN 2. – To be filled in by Statistics:** the registration number of the settlement on which territory the water abstraction source is located; the code of the river and/or basin; the registration number of the public water supply system from which water has been purchased.

**COLUMN 3.** Indicate the total quantities of water abstracted or purchased by the enterprise.

**COLUMN 4.** Indicate total water losses.

### TABLE 2. WATER USE

Water quantities abstracted from own abstraction source or purchased from the public water supply system are to be indicated according to their end-use as:

**COLUMN 1.** Cooling waters in electricity generation

**COLUMN 2.** Cooling waters in Manufacturing

**COLUMN 3.** Flowing waters in hydropower plants.

**COLUMN 4.** Waters used in the process of production.

**COLUMN 5.** Waters in the process of industry incorporated in the product (e.g. food and beverage production, various acids production, as well as fillers in wood industry, etc.).

**COLUMN 6.** Waters for sanitary purposes (for hand washing, bathing, food preparation, etc.).

**COLUMN 7.** Water used for other purposes (e.g. washing and maintenance of production sections and devices, transport of raw materials, etc.).

**COLUMN 8.** The total quantities of wastewaters as the sum of columns 1, 2, 3, 4, 6 and 7 are to be indicated.

### TABLE 3. RECIRCULATING WATERS

Quantities of fresh added waters are entered in this table, as totals, by type of abstraction and by purpose.

Recirculating waters are waters within circling (recirculating) system.

Total annual quantity of fresh waters added includes also the quantities that the reporting unit uses to compensate the costs that appeared in the recirculating system.

### TABLE 4. WATER BODY AND WASTEWATER DISCHARGE

Wastewaters are waters which after being treated are taken to the treated plants or have direct discharge in recipient (earth, surface water). Flowing waters in hydropower plans are considered wastewaters.

Wastewater discharge in own water body implies direct discharge through own sewerage/water supply network.

**COLUMN 1.** Indicate the name of the settlement on which territory the water body is located, the name of the river or basin in which water is discharges and the name of the public enterprise in which sewerage wastewaters are discharged.

**COLUMN 2. To be filled in by Statistics:** Indicate the registration number of the settlement on which territory wastewaters are discharged, the code of the river/basin from the code list, and the registration number of the public utilities enterprise in which sewerage network wastewaters are discharged.

**COLUMN 3.** Indicate the quantity of non treated wastewaters discharged in the water body.

**COLUMN 4.** Indicate the quantity of discharged waters from recirculating systems.

**COLUMNS 5, 6 and 7.** Indicate the quantity of treated wastewaters discharged in the water body according to the type of treatment used (primary, secondary and/or tertiary).

**COLUMN 8.** Indicate the total quantities of discharged wastewaters (the sum of columns 3, 5 6 and 7)

### TABLE 5. DEVICES FOR WASTEWATER TREATMENT

Indicate the number of devices used for wastewaters treatment by primary, secondary or tertiary treatment process. The type of the device used must correspond to the wastewaters treatment process in table 3.

The data on the number of devices, capacity (designed, realized) are to be entered by enterprises that are legal owners of the device, co-owners on which territory the device is located, i.e. those that have relevant technical and accounting documentation.

### TABLE 6. REUSED WATER

Indicate total quantities of reused waters that were treated by wastewater treatments and were reused for: cooling, sanitary purposes, transport of raw materials, washing and maintenance of devices and production sections and for other purposes (e.g. irrigation, in agriculture), and that were afterwards discharged into underground or surface watercourses. Wastewaters discharged in watercourses and re-abstracted, as well as used waters (used by other reporting unit) from the same watercourse are not to be taken as reused waters.

### TABLE 7. BIOLOGICAL AND CHEMICAL OXYGEN DEMAND AND QUANTITY OF HEAVY METALS

Indicate the values of BOP<sup>1)</sup> and COD<sup>2)</sup>, quantities of discharged substances based on nitrogen and phosphorus, as well as quantities of heavy metals and other not mentioned metals (that are to be specified), expressed in kg/day. **NOTE** below is to indicate the name of institution that performed measuring.

### TABLE 8. COSTS FOR WATER AND WASTEWATER TRANSPORT

Indicate in the table the total annual costs (in RSD) incurred by the enterprise in the previous year (2012) for water purchased from public water supply system and for transport of wastewaters through the sewerage network. Moreover, indicated are the unit prices (RSD /m<sup>3</sup>) for purchased fresh water, i.e. transported wastewaters, paid on the basis of public utilities enterprise's tariff.

Electronic form of the questionnaire and methodological explanation are available on the website of the Statistical Office of the Republic of Serbia: [www.stat.gov.rs](http://www.stat.gov.rs).

<sup>1)</sup> BOD – biological oxygen demand.

<sup>2)</sup> COD – chemical oxygen demand.