

**MINISTRY OF NATURAL  
RESOURCES AND  
ENVIRONMENT**

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No. 47/2017/TT-BTNMT

**THE SOCIALIST REPUBLIC OF VIETNAM**  
**Independence - Freedom - Happiness**

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*Hanoi, November 07, 2017*

**CIRCULAR**

**ON SUPERVISION OF EXTRACTION AND USE OF WATER RESOURCES**

*Pursuant to the Law on Water Resources No. 17/2012/QH13;*

*Pursuant to the Government's Decree No. 201/2013/ND-CP dated November 27, 2013  
elaborating some articles of the Law on Natural Resources;*

*Pursuant to the Government's Decree No. 36/2017/ND-CP dated April 04, 2017 defining the  
functions, tasks, powers and organizational structure of the Ministry of Natural Resources and  
Environment*

*At the request of the Director General of Department of Water Resources Management;*

*The Minister of Natural Resources and Environment hereby adopts a Circular on supervision of  
extraction and use of water resources.*

**Chapter I**

**GENERAL PROVISIONS**

**Article 1. Scope**

This Circular provides for supervision of extraction and use of water resources.

**Article 2. Regulated entities**

1. Central and local water resources authority.

2. Production, business and service establishments (below collectively referred to as  
“establishments”) that have one of the following water extraction works:

a) Surface water reservoirs serving electricity generation with an installed capacity of over 50kW  
and including irrigation reservoirs in association with hydropower reservoirs;

b) Surface water reservoirs with a capacity of over 0.1 m<sup>3</sup> per second in case of supply of water for agricultural production and aquaculture, and over 100 m<sup>3</sup> per 24 hours in case of supply of water for other purposes;

c) Drains, pumping stations and other surface water extraction works specified in Points and b of this Circular with a capacity of over 0.1 m<sup>3</sup> per second in case of supply of water for agricultural production and aquaculture, and over 100 m<sup>3</sup> per 24 hours in case of supply of water for other purposes;

d) Groundwater extraction works with a capacity of 10 m<sup>3</sup> per 24 hours;

### **Article 3. Rules for supervision**

1. Accuracy, truthfulness and objectiveness of information and data on extraction and use of water resources are ensured. Such information and data are also used in a convenient manner.

2. The information and data is systematically organized, promptly and continuously updated and adequate to serve supervision of extraction and use of water resources.

3. Uniformity in information and data is ensured in terms of space and time; between central government and local governments and in each river basin.

4. Uniformity between supervision requirements and monitoring by the establishment issued with the water extraction license is ensured.

## **Chapter II**

### **SPECIFIC PROVISIONS**

#### **Article 4. Supervision methods**

Supervision of extraction and use of water resources means the supervision of extraction and use of water resources that is carried out by a competent authority by monitoring the monitoring data obtained from the establishments using and extracting water resources. The supervision specified in Articles 9, 10, 11 and 12 of this Circular shall be carried out using the following methods:

1. Automatic and online supervision: monitor automatic and continuous measurement and monitoring data connected to and transferred directly to the system of supervision of extraction and use of water resources (below collectively referred to as “supervision system”).

2. Camera supervision: through the camera, monitor the images connected to and transferred directly to the supervision system.

3. Periodic supervision: monitor the measurement and monitoring data periodically updated to the supervision system.

## **Article 5. Supervision system**

1. The supervision system is a uniform system that is designed to connect and share information and data of the establishments extracting and using water resources with regulatory authorities from central to local government, including:

- a) Central data storage equipment and data management and processing software;
- b) Local data storage equipment and data management and processing software;
- c) Database of the supervision system;
- d) Equipment for measuring, connecting, directly transferring and updating data from the establishment having water extraction works to the database of the supervision system.

2. Responsibility for investment in and creation of supervision system:

- a) The Ministry of Natural Resources and Environment shall invest in, design and install central data storage equipment and data management and processing software, and establish database of the supervision system set forth in Points a and c, Clause 1 of this Article;
- b) The People's Committee of province or central-affiliated city (hereinafter referred to as "People's Committee of the province") shall invest in and install local data storage equipment set forth in Point b, Clause 1 of this Article;
- c) The establishment having water extraction works specified in Clause 2, Article 2 of this Circular shall invest in and install measuring equipment and other relevant equipment as prescribed in Point d, Clause 1 of this Article.

3. Responsibility for management and operation of supervision system:

- a) The Department of Water Resources Management shall organize the management, operation, maintenance and maintain operation of the central data storage system and database of the system;
- b) The provincial-level Department of Natural Resources and Environment shall organize the management, operation, maintenance and maintain operation of the local data storage system and database of the system;
- c) The establishment having water extraction works shall manage, operate, maintain and maintain operation of the equipment for measuring, connecting, directly transferring and updating data to the database of the supervision system.

4. Information and data obtained from the supervision system shall serve as one of the bases for inspection and actions against administrative violations upon the compliance with regulations specified in the water resource licenses and other regulations of the law on water resources.

## **Article 6. Requirements for data storage equipment and data management and processing**

1. The data storage equipment including servers, network equipment, information and data storage equipment and other auxiliary equipment must satisfy the following requirements:

a) The equipment must be compatible with information and data transmission infrastructure to ensure stable and continuous operation. Information must be secured as prescribed;

b) Connection and sharing of information and data on supervision of extraction and use of water resources between central and local governments must be ensured. Each local authority must be granted privilege configuration and control of database on water extraction works in the area under its management;

c) The central data storage equipment must be automatically connected, directly transfer, update and store data of the establishment having water extraction works to the database of the supervision system.

2. Data management and processing software must be designed to run on web, integrate with tablets, mobile phones and other mobile devices and must have the following key functions:

a) Automatic and periodic update on information and data;

b) Access control;

c) Automatic analysis and processing of information and data on a periodic basis and issuance of notice and warnings;

d) Information and data aggregation, report preparation;

dd) In case of non-compliance with regulations, automatically issuing a notice and warning to the establishment having water extraction works via email, SMS and in similar forms.

## **Article 7. Requirements for supervision database**

1. The database on supervision of extraction and use of water resources must be organized and set up in a reasonable manner for access, use, management and regular update.

2. The database must include information about technical specifications for the works, management and operation of the works and the following main information:

a) Regarding database on surface water extraction works: aggregate information and database on the minimum discharge flow, plant overflow rate, weir overflow rate, water level at reservoirs in case of extraction of surface water for electricity generation; capacity, minimum discharge flow, water level at reservoirs, quality of extraction of surface water for agriculture, aquaculture and other purposes;

b) Regarding database on groundwater extraction works: water level in monitoring wells; water level in extraction well; capacity, quality of water during extraction.

### **Article 8. Requirements for equipment for measuring, connecting and transferring data of the establishment having works**

The measuring equipment used in water extraction works must satisfy the following main requirements:

1. The value to be measured must be within the measurement range.
2. The measuring equipment must operate continuously and transfer information and data to the equipment for storing database of the supervision system;
3. Regarding the water level meter, the absolute error must not exceed 01 cm; regarding the flow meter, the relative error must not exceed 5% of the actually measured value.
4. Regarding the equipment for automatically measuring water level, discharge, measurement range must not exceed 15 minutes at a time; regarding surveillance cameras, the shutter speed must be at least 01 frame per minute.
5. The measuring equipment must undergo calibration and inspection as prescribed.

### **Article 9. Supervision of extraction and use of surface water through reservoirs for electricity generation**

The supervision of extraction and use of surface water through hydropower reservoirs or irrigation reservoirs specified in Point a, Clause 2, Article 2 of this Circular shall be carried out as follows:

1. Supervision parameters:

- a) Water level;
- b) Minimum discharge flow;
- c) Plant overflow rate;
- d) Weir overflow rate;

2. Supervision methods:

- a) The reservoir with a total capacity of at least one (01) million m<sup>3</sup>: carry out automatic and online supervision of the parameters specified in Clause 1 of this Article and camera supervision of the water discharge;

b) The reservoir with a total capacity of less than (01) million m<sup>3</sup>: carry out automatic and online supervision of the parameters specified in Points a, b and c, Clause 1 of this Article, periodic supervision of the parameters specified in Point d, Clause 1 of this Article, and camera supervision of the water discharge to maintain minimum flow and weir overflow rate.

### 3. Supervision frequency:

- a) Within 15 minutes at a time for the parameters under automatic and online supervision;
- b) Within 06 hours at a time in the flood season, 12 hours at a time in the dry season and the data must be updated to the supervision system at least once a day before 20:00 for the parameters under periodic supervision.

## **Article 10. Supervision of extraction of surface water through reservoirs for agricultural production, aquaculture and other purposes**

The supervision of extraction and use of surface water through reservoirs for agricultural production, aquaculture and other purposes specified in Point b, Clause 2, Article 2 of this Circular shall be carried out as follows:

### 1. Supervision parameters:

- a) Water level;
- b) Minimum discharge flow;
- c) Capacity;
- d) Quality of water during extraction according to regulations.

### 2. Supervision methods:

- a) The extraction work with a capacity of at least 2 m<sup>3</sup> per second in case of supply of water for agricultural production and aquaculture, or at least 50,000 m<sup>3</sup> per 24 hours in case of supply of water for other purposes:

Carry out automatic and online supervision of the parameters specified in Points a, b and c, Clause 1 of this Article, and periodic supervision of the parameters specified in Point d, Clause 1 of this Article.

- b) The extraction work with a capacity exceeding 0.1 m<sup>3</sup> but not exceeding 2 m<sup>3</sup> per second in case of supply of water for agricultural production and aquaculture or exceeding 100 m<sup>3</sup> per 24 hours but not exceeding 50,000 m<sup>3</sup> per 24 hours in case of supply of water for other purposes:

Carry out automatic and online supervision of the parameters specified in Point b, Clause 1 of this Article, and periodic supervision of the parameters specified in Points a, c and d, Clause 1 of this Article.

3. Supervision frequency:

a) Regarding the parameters specified in Points a, b and c, Clause 1 of this Article, Clause 3, Article 9 of this Circular shall be complied with;

b) Regarding the quality of water during extraction specified in Point d, Clause 1 of this Article, data must be updated to the supervision system within 05 days from the day on which the analytical results are available.

### **Article 11. Supervision of extraction of surface water through drains, pumping stations and other surface water extraction works**

The supervision of extraction and use of surface water through drains, pumping stations and other surface water extraction works specified in Point c, Clause 2, Article 2 of this Circular shall be carried out as follows:

1. Supervision parameters:

a) Capacity;

b) Quality of water during extraction according to regulations.

2. Supervision methods: carry out periodic supervision of the parameters specified in Clause 1 of this Article.

3. Supervision frequency:

a) Within 12 hours at a time for capacity and data must be updated to the supervision system at least once a day before 20:00;

b) Regarding the quality of water during extraction, data must be updated to the supervision system within 05 days from the day on which the analytical results are available.

### **Article 12. Supervision of extraction of groundwater**

The supervision of extraction and use of groundwater through the works specified in Point d, Clause 2, Article 2 of this Circular shall be carried out as follows:

1. Supervision parameters:

a) Capacity;

b) Water level in extraction well;

c) Quality of water during extraction according to regulations;

d) Regarding the work with a capacity of at least 3,000 m<sup>3</sup> per 24 hours, in addition to supervising the parameters specified in Points a, b and c of this Clause, water level in monitoring wells must be supervised.

## 2. Supervision methods:

a) Regarding the work with a capacity of at least 3,000 m<sup>3</sup> per 24 hours: carry out automatic and online supervision of the parameters specified in Points a, b and d, Clause 1 of this Article, and periodic supervision of quality of water during extraction in the extraction work specified in Point c, Clause 1 of this Article;

b) Regarding the work with a capacity of from 200 m<sup>3</sup> to less than 3,000 m<sup>3</sup> per 24 hours: carry out automatic and online supervision of the parameters specified in Points a and b, Clause 1 of this Article, and periodic supervision of quality of water during extraction in the extraction work specified in Point c, Clause 1 of this Article;

c) Regarding the work with a capacity exceeding 10 m<sup>3</sup> but not exceeding 200 m<sup>3</sup> per 24 hours: carry out periodic supervision of the parameters specified in Points a, b and c, Clause 1 of this Article.

## 3. Supervision frequency:

a) Within 01 hour at a time for the parameters under automatic and online supervision;

b) Within 12 hours at a time for the parameters under periodic supervision and data must be updated to the supervision system before 20:00; regarding the quality of water during extraction, data must be updated to the supervision system within 05 days from the day on which the analytical results are available.

## **Chapter III**

### **RESPONSIBILITIES AND IMPLEMENTATION**

#### **Article 13. Responsibilities of the People's Committees of provinces**

1. Direct Departments of Natural Resources and Environment and relevant authorities and units to design and install local data storage equipment to ensure conformity with the roadmap for investment in and installation of surveillance equipment in the establishments within their area.

2. Direct the management, operation and maintenance of data storage equipment under their management and maintain the fulfillment of necessary conditions for its operation.



3. Inspect the implementation of regulations on supervision of extraction and use of water resources and take actions against violations of this Circular within their competence.

#### **Article 14. Responsibilities of the Department of Water Resources Management**

1. Take charge and cooperate with relevant units in designing and installing central data storage equipment and data management and processing software, and establishing database of the supervision system, using water resources nationwide to ensure conformity with the roadmap for investment in and installation of surveillance equipment in the establishments extracting water resources.

2. Consult and assist the Minister of Natural Resources and Environment in directing the creation, management and operation of the supervision system nationwide.

3. Organize the management and supervision of natural resources extraction and use under licensing authority by the Ministry of Natural Resources and Environment.

4. Inspect or cooperate in inspecting and taking actions within its competence or requesting a competent authority to take actions against the violations of this Circular committed by organization extracting and using water resources and publish such organization on websites within its competence.

#### **Article 15. Responsibilities of the Department of Natural Resources and Environment**

1. Provide counseling and assist the People's Committees of provinces in directing the creation, management and operation of supervision system under their management; submit reports on supervision of extraction and use of water resources within its area to the People's Committees of provinces and Departments of Water Resources Management.

2. Provide guidance and supervise the establishments extracting and using water resources within its area in providing and transferring information and data from the surveillance equipment used in the works to the database system.

3. Organize the management and supervision of natural resources extraction and use under licensing authority by the Ministry of Natural Resources and Environment.

4. Inspect the implementation of regulations on supervision and take actions within its competence or request a competent authority to take actions against the establishments violating this Circular and publish such establishments on websites within its competence.

#### **Article 16. Responsibilities of the establishments extracting and using water resources**

1. Invest in, install, manage and operate surveillance equipment in the works in case of extraction and use of water resources according to regulations and submit a report on investment in and installation of equipment to the People's Committee of the province (through the Department of Natural Resources and Environment) where the work is located.

2. Connect and update data on regular, continuous and periodic supervision to the supervision system in accordance with regulations of this Circular.

3. Store and provide their information and data on supervision of extraction and use of water resources in service of inspection or at the request of the competent authority.

**Article 17. Transitional clause**

1. Regarding the establishment issued with the water extraction license before the effective date of this Circular, the equipment installation, connection, provision of information and data on supervision on extraction and use of water resources shall be completed before December 31, 2019.

2. Regarding the water extraction license that has been issued but has yet to specify regulations on supervision parameters, methods and frequency and provision of information and data for supervision or has specified regulations in contravention of those of this Circular, the issuing authority shall consider making amendments to monitoring and supervision requirements in accordance with regulations of this Circular upon adjustment, extension and reissuance of the license. Where necessary, the issuing authority shall decide to make amendments to regulations on monitoring and supervision in conformity with this Circular.

**Article 18. Effect**

1. This Circular comes into force from December 22, 2017.

2. Difficulties that arise during the implementation of this Circular should be reported to the Ministry of Natural Resources and Environment./.

**PP. THE MINISTER  
THE DEPUTY MINISTER**

**Vo Tuan Nhan**