

**MINISTRY OF NATURAL
RESOURCES AND
ENVIRONMENT**

No.: 27/2014/TT-BTNMT

SOCIALIST REPUBLIC OF VIETNAM
Independence - Freedom - Happiness

Hanoi, May 30, 2014

CIRCULAR

**REGULATING THE REGISTRATION FOR GROUNDWATER EXTRACTION, FORM OF
DOSSIER FOR ISSUE, EXTENSION, MODIFICATION, RE-ISSUE OF WATER
RESOURCE PERMIT**

Pursuant to the Law on water resources No. 17/2012/QH13 dated June 21, 2012;

Pursuant to Decree No. 21/2013/ND-CP dated March 04, 2013 of the Government defining the functions, tasks, powers and organizational structure of the Ministry of Natural Resources and Environment;

Pursuant to Decree No. 201/2013/ND-CP dated November 27, 2013 of the Government detailing the implementation of a number of articles of the Law on water resources;

At the request of Director of Department of Water Resources Management and Director of Legal Department,

The Minister of Natural Resources and Environment regulates the registration for groundwater extraction, form of dossier for issue, extension, modification, re-issue of water resource permit.

Chapter I

GENERAL PROVISION

Article 1. Scope

This Circular regulates the registration for groundwater extraction, form of application, permit, contents of scheme and report in dossier for issue, extension, modification, re-issue of water resource permit.

Article 2. Subjects

This Circular applies to the foreign and domestic agencies, organizations and individuals (hereafter referred to as organizations and individuals) having activities related to the exploration, extraction and use of water resources and discharge of wastewater into the water sources of the territory of the Socialist Republic of Vietnam.

Article 3. Explanation of terms

1. Groundwater extraction works are a system that consists of one or more bored wells, dug wells, pits, corridors, veins and caves for groundwater extraction owned by an organization or individual and with the adjacent distance between them of less than 1,000m.
2. Surface water extraction works consist of reservoir, rolling weir, spillway, canal, sluice, pumping station of surface water extraction.
3. Flow of groundwater extraction of a works is the total flow of bored wells, dug wells, pits, corridors, veins and caves for groundwater extraction of that works.
4. Areas affected by the groundwater extraction of a works is the area with water level or pressure level of aquifer lowered greater than 0.5 m due to the extraction activities of that works.
5. Production, business and services facilities which discharge wastewater with the scale of less than 5 m³/day with the required permit for discharge wastewater into water sources are the facilities operating in the following fields:
 - a) Textile dyeing; garment with the textile dyeing and pattern printing; laundry with washing step;
 - b) Metallurgy, metal recycling, metal plating; production of electronic components;
 - c) Treatment and recycling of industrial wastes; tanning and leather recycling;
 - d) Mineral processing with chemical use; petrochemical refining and processing of petroleum products;
 - dd) Production of pulp and paper; plastic, rubber, detergents, additives, fertilizers, chemicals, pharmaceuticals, oriental medicine, cosmetics, pesticides; battery; bamboo and rattan products, wood processing with chemical impregnation; processing of cassava starch and monosodium glutamate;
 - e) Medical examination and treatment with medical wastewater generated;
 - g) Performance of experiments with the use of chemicals and radioactive substances.

Chapter II

REGISTRATION FOR GROUNDWATER EXTRACTION

Article 4. Areas with compulsory registration for the groundwater extraction

1. These areas are:

- a) Areas with the groundwater level which is lower than the water level lowered as stipulated by People's Committee of provinces and centrally-affiliated cities (hereafter referred to as provincial People's Committee); areas with the groundwater level which has been declined for three (03) consecutive years and is at risk of lower than the permissible low water level;
- b) Areas with land subsidence, deformation of works due to the extraction of groundwater; urban areas and rural residential areas located in limestone areas or in areas with weak soil structure;
- c) Areas with saltwater intrusion due to groundwater extraction; deltas, coastal areas with aquifers of salt and fresh water interlaced or areas adjacent to areas where the groundwater is salty or brackish;
- d) Areas polluted or increasingly polluted due to groundwater extraction; areas located within a distance smaller than one (01) km to the concentrated disposal site, landfills, cemetery and other sources of hazardous waste;
- dd) Urban areas, concentrated residential areas in rural areas, export processing zones, concentrated industrial clusters and handicraft villages that have been connected to the centralized water supply system with stable water supply assurance in terms of quantity and quality.

2. Based on the characteristics of the aquifers, the current state of extraction and use of groundwater and management requirements of local authorities, the provincial-level People's Committees shall specify the permissibly lowered water level, but not exceeding half the thickness of the aquifer for the unconfined aquifer, and not exceeding the roof of aquifer and not deeper than 50 m from the ground to the confined aquifers

3. Organizations and individuals having their bored wells to extract groundwater for business, production and services with the scale of not greater than 10 m³/day and for domestic use of households, for cultural, religious and scientific research activities located in the areas specified in Clause 1 of this Article and with their depth of greater than 20 m must register the groundwater extraction.

Article 5. Limitation and announcement of areas with compulsory registration for groundwater extraction

1. Designation of areas with compulsory registration for groundwater extraction

a) Department of Natural Resources and Environment of the provinces and centrally-affiliated cities (hereinafter referred to as the Department of Natural Resources and Environment) will conduct the investigation, evaluation and identification of areas with compulsory registration for groundwater extraction; make a list of areas with compulsory registration for groundwater extraction in the local areas.

b) List of areas with compulsory registration for groundwater extraction

- Geographic location, area, administrative boundaries of each area;
- Main data and grounds designation of each area

2. Approval for List of areas with compulsory registration for groundwater extraction

Department of Natural Resources and Environment shall submit the List of areas with compulsory registration for groundwater extraction to the provincial People's Committee for approval after consulting with the Department of Water Resources Management.

3. Publication of List of areas with compulsory registration for groundwater extraction

Department of Natural Resources and Environment shall publicize the approved List of areas with compulsory registration for groundwater extraction on the mass media at locality and make announcement to the People's Committees of districts, townships and provincially and centrally-affiliated cities (hereafter referred to as district People's Committee) and People's Committees of communes, wards and towns (hereafter referred to as communal People's Committee) where there are areas with compulsory registration for groundwater extraction.

4. Adjustment of List of areas with compulsory registration for groundwater extraction

Every five (05) years or in case of necessity, the Department of Natural Resources and Environment shall review and request the provincial People's Committee to adjust the List of areas with compulsory registration for groundwater extraction.

Article 6. Registration for groundwater extraction

1. Registration authority for groundwater extraction is the communal People's Committee or district People's Committee under the decision of provincial People's Committee.

2. Order and procedures for registration:

a) Based on the approved List of areas with compulsory registration for groundwater extraction, heads of residential groups, heads of hamlets, villages, mountain hamlets, mountain villages (hereafter referred to as head of residential group) shall review and make a list of organizations and individuals having their bored wells for groundwater extraction subject to compulsory registration in the areas; make an announcement and hand over two (02) declarations specified in the Form No.38 of the Annex attached to this Circular to the organizations and individuals for declaration;

In case of no bored well, organizations and individuals shall make registration for groundwater extraction before well boring;

b) Within ten (10) working days after receipt of 02 declarations, the organizations and individuals shall complete them and submit them to the registration authority or the head of residential groups for submission to the communal People's Committee. The communal People's

Committee shall submit these declarations to the district People's Committee in case the registration authority is the district People's Committee.

c) Within ten (10) working days after receipt of 02 declarations from the organizations and individuals, the registration authority shall verify the contents and certify these declarations and send one (01) copy to the organizations and individuals;

3. In case of having registered the groundwater extraction, if the extraction and use are stopped, the organizations and individuals shall inform and return the declarations to the registration authority or the head of residential groups and fill in the unused wells as stipulated.

4. The registration authority shall have a monitoring book to update data of registration for groundwater extraction on local areas, make a summary and report to the Department of Natural Resources and Environment. Where the registration authority is the communal People's Committee, the report of registration result shall be sent to the district People's Committee for summary and report to the Department of Natural Resources and Environment;

Chapter III

FORM OF APPLICATION, PERMIT, CONTENT OF SCHEME AND REPORT IN DOSSIER FOR ISSUE OF WATER RESOURCES PERMIT

Article 7. Form of application for issue, extension, adjustment and re-issue of water resources permit

The application for issue, extension, adjustment and re-issue of water resources permit is made under the form specified in Part I of the Annex attached to this Circular.

Article 8. Form of water resources permit

The water resources permit is made under the form specified in Part II of the Annex attached to this Circular.

Article 9. Content of scheme and report on exploration, extraction, use of water resources and discharge of wastewater into the water sources;

1. The contents of scheme and report on exploration, extraction, use of water are made under the form specified in Part III of the Annex attached to this Circular.

2. The contents of scheme and report on extraction and use of surface water and seawater are made under the form specified in Part IV of the Annex attached to this Circular.

3. The contents of scheme and report on discharge of wastewater into the water sources are made under the form specified in Part V of the Annex attached to this Circular.

Chapter IV

IMPLEMENTATION

Article 10. Effect

1. This Circular takes effect on July 15, 2014;

This Circular supersedes Circular No. 02/2005/TT-BTNMT dated June 24, 2005 of the Minister of Natural Resources and Environment guiding the implementation of Decree No. 149/2004/ND-CP dated July 27, 2004 of the Government on licensing the exploration, extraction, use of water resources and discharge of wastewater into water sources.

2. Dossiers to request the issue of permit for exploration, extraction, use of water resources and discharge of wastewater into water sources received by the competent authority before the effective date of this Circular shall be assessed and considered an issue of permit under the form specified in Circular No. 02/2005/TT-BTNMT dated June 24, 2005 of the Minister of Natural Resources and Environment guiding the implementation of Decree No. 149/2004/ND-CP dated July 27, 2004 of the Government on licensing the exploration, extraction, use of water resources and discharge of wastewater into water sources.

Article 11. Responsibility for implementation

1. The provincial People's Committees are responsible for direction of implementing this Circular at localities;

2. Department of Natural Resources and Environment is responsible for advising and assisting the provincial People's Committee in managing the registration and licensing of exploration, extraction, use of water resources and discharge of wastewater into water sources in the local area; making annual summary and report for submission to the provincial People's Committee and the Department of water resource management on the registration and licensing of exploration, extraction, use of water resources and discharge of wastewater into water sources before December 15.

3. The Department of water resource management shall advise and assist the Ministry of Natural Resources and Environment in management of registration and licensing of exploration, extraction, use of water resources and discharge of wastewater into water sources and summary of reality of registration and licensing of exploration, extraction, use of water resources and discharge of wastewater into water sources on a national scale.

**PP. MINISTER
DEPUTY MINISTER**

SOCIALIST REPUBLIC OF VIETNAM
Independence – Freedom - Happiness

APPLICATION FOR LICENCE TO EXTRACT AND USE GROUND WATER

Respectfully addressed to:(1)

1. Organization/individual applying for licence (applicant):

1.1. Name of organization/individual (*specify the name according to Establishment Decision or Business Registration Certificate in case of an organization or according to ID card in case on an individual*):

1.2. Business Registration Certificate No., place of issue, date of issue or Establishment Decision No., Decision-issuing agency (*in case of an organization*)/ID number, place and date of issue (*in case of an individual*):

1.3. Address (*Specify the address of headquarter according to Business Registration Certificate or Establishment Decision (in case of an organization), or specify the address according to permanent residence (in case of an individual)*):

1.4. Phone number: Facsimile: Email:

2. Contents of the application:

2.1. Location of the extraction project:(2)

2.2. Purposes of extraction and use of water:(3)

2.3. Aquifers:(4)

2.4. Number of extraction wells (*dug lakes/galleries/open arteries/caves*):(5)

2.5. Total amount of extractible water:(m^3 /day & night)

2.6. Licence validity (*10 years at a maximum*)

Number sign, location and factors of the extraction project:

Number sign	Coordinate (VN2000, central meridian..., reference zone ...)		Depth of water extraction section		Flow (m^3/day & night)	Extraction mode (hour/day & night)	Immobile water level (m)	Maximum mobile water level (m)	Aquifer
	X	Y	From	To					

3. Attached papers and documents:

- Map of extraction area and location of the extraction project.
- Reports on investigation and assessment of ground water reserves accompanied by the extraction plan with respect to projects of at least 200 m^3/day & night or reports on construction of extraction wells with respect to projects of less than 200 m^3/day & night (*In case no extraction project is available*).
- Reports on current conditions of extraction (*in case the extraction project is in operation*).
- Analysis results of ground water quality no later than six months to the time of submission of the application.
- Contribution of ideas, consolidation of explanations and suggestions from communities (*for projects of at least 12,000 m^3/day & night and not related to state secrets*).
- Other relevant papers and documents

4. Commitments of applicant:

- (*Name of the applicant*) guarantees all the information contained in this application and papers and documents attached herewith are true and takes full responsibility to the law.
- (*Name of the applicant*) undertakes to comply fully with provisions laid down in the licence and fulfill obligations prescribed in Clause 2, Article 43 of the Law on Natural Resources of Water and other relevant law provisions.
- (*Name of the applicant*) has sent one (01) application to the Service of Natural Resources and Environment of the province/city:(6)

The licensing agency is hereby respectfully requested to grant the licence for extraction and use of ground water./.

.....,, dated

The applicant
(Signature, full name and stamp (if any))

INSTRUCTIONS ON WRITING THE APPLICATION:

(1) Name of the licensing agency: Ministry of Natural Resources and Environment or People’s committees of provinces if licence grant falls within the authority of the Ministry of Natural Resources or People’s committees of provinces respectively (*as prescribed in Article 28 of the Government’s Decree No. 201/2013/NĐ-CP dated November 27, 2013 detailing the implementation of a number of articles of the Law on Natural Resources of Water*).

(2) Specify specific address or village/hamlet ...commune/ward ...district ... province/city ...where the extraction project is located; if the extraction project is located in several administrative units, specify the number of extraction wells in each administrative unit.

(3) Specify purposes of extraction and use of ground water: domestic, production, irrigation, aquaculture...activities; if the ground water is exploited for multiple purposes, specify the flow for individual purposes.

(4) Specify aquifers; if the extraction is carried out in multiple aquifers, specify the flow in each aquifer.

(5) Specify the number of extraction wells or the number of *dug lakes/galleries/open arteries/caves*; if the extraction is carried out in multiple aquifers, specify the number of wells in each aquifer.

(6) Specify in case licence grant falls within the authority of the Ministry of Natural Resources and Environment.

Form No. 27

(NAME OF THE APPLICANT)

(Inside cover page)

REPORT ON CURRENT CONDITIONS OF GROUND WATER EXTRACTION

.....(1)

(In case the extraction project is in operation)

The applicant

PREPARED BY

(Signature and stamp (if any))

(Signature and stamp)

Place name,/year...

INSTRUCTIONS

**CONTENTS OF THE REPORT ON CURRENT CONDITIONS OF GROUND WATER
EXTRACTION**

(In case the extraction project is in operation)

A. FOR PROJECTS OF AT LEAST 200 m³/DAY & NIGHT

FOREWORD

1. Summarize information about an organization/individual as owner of the extraction project *(name and address of headquarter, business areas according to Business Registration Certificate or Establishment Decision (for an organization); full name, ID card number, place and date of issue, address according to permanent residence (for an individual))*.
2. Provide explanations for information and principal factors of the extraction project including type of project, purposes of extraction and use of water, scope of water supply and entities (water users); year of construction and operation of the project; total number of drilled wells (*dug wells/lakes/galleries/open arteries/caves*), total extractible volume of water from the project; aquifer or extraction depth.
3. Provide a general overview of basic contents of the report including natural, social and basic information about ground water sources, current conditions of extraction and sources of waste in extraction area; impacts of the extraction project on sources of water, environment, other extraction projects and plan for extraction and use of ground water.
4. Compile documents to be used for the formulation of reports on ground water extraction including planning for natural resources of water and relevant water supply planning; reports and documents concerning investigation, assessment and monitoring of ground water carried out in extraction area; reports and figures about survey, construction and operation of the extraction project; legislative documents, technical regulations, standards and other relevant documents.

5. Provide full description of capacity of the organization or individual which makes the report on ground water extraction and assess satisfaction of the requirements as prescribed; lists of members involved in making the report.

Chapter I

GEOGRAPHIC, NATURAL AND SOCIAL CONDITIONS OF EXTRACTION AREA

I. Provide a general overview of geographic, natural and social conditions of the extraction area and related factors having direct impacts on sources of ground water in the area.

II. Provide specific description of information and figures about geographic, natural and social conditions of the extraction area as follows:

1. Administrative location, coordinate of zero points (*according to VN2000, central meridian, reference zone*), limits of the extraction project accompanied by a drawing showing location of extraction area and relationships with surrounding areas.

2. Topographical, geomorphological, hydrometeorological and oceanographical characteristics of extraction area; assessment of impacts of such factors on the formation of reserves, mobility and quality of sources of ground water in extraction area.

3. Characteristics of population distribution, population density and other socio-economic factors relating to extraction and use of water in general and ground water in particular to supply running water in extraction area or other related areas.

4. Key business and service operations (industry, agriculture, livestock production, services , aquaculture ...) in extraction area and activities of extraction and use of water serving such operations.

III. Assess and determine major elements of geographical, natural and social conditions that have great and direct impacts on sources of ground water in extraction area.

Chapter II

CHARACTERISTICS OF SOURCES OF GROUND WATER, CURRENT CONDITIONS OF EXTRACTION AND SOURCES OF WASTE IN EXTRACTION AREA

I. Provide a general overview of characteristics of sources of ground water and current conditions of extraction, sources of waste, related matters that have direct impacts on sources of ground water in extraction area.

II. Present specific information and figures about characteristics of sources of ground water, current conditions of extraction, sources of waste in extraction area as follows:

1. Investigation and assessment of natural resources of ground water, current conditions of extraction and sources of waste in extraction area

a) Statistical and consolidated reports on results of investigation and assessment of natural resources of ground water, results of statistical investigation of current conditions of ground water, investigation and construction of the extraction project, documents on investigation and assessment of sources of waste carried out in extraction area;

b) Scrutiny and assessment of results of investigation and assessment of natural resources of water; selection of information and figures used for making reports.

2. Describe characteristics of sources of ground water in extraction area based on results of investigation and assessment of natural resources of water aforementioned.

a) Characteristics of aquifers

Describe characteristics of aquifers in extraction area including information and figures about scope, depth of distribution, thickness and composition of soil and rock, permeability, water bearing, mobility and level of water of each aquifer.

Particularly for extraction projects of at least 3,000 m³/day & night, characteristics of supply sources, supply areas, drainage areas, flow direction, connection between ground water and surface water, rainwater and other aquifers should be described.

b) Characteristics of aquifers

Describe characteristics of low permeable, impermeable layers in extraction area including information and figures about scope of distribution by area and depth; distribution depth, thickness and composition of soil and rock, permeability and impermeability.

c) Characteristics of water quality

Describe characteristics of quality of ground water, pollution and saltwater intrusion into aquifers in extraction area; assess quality of water from aquifers according to technical regulations on ground water quality and standards on water use.

d) Hydrogeological maps or diagrams

Particularly for projects of at least 3,000 m³/day & night, principal contents of the hydrogeological map or diagram (1:25000 scale or greater) and attached cross sections should be explained to clarify hydrogeological characteristics of extraction area.

dd) Scope of impact of extraction project:

Provide explanations, facts and data to clarify and localize scope of impact on the map or diagram.

3. Based on results of statistical investigation of current conditions of extraction and documents concerning investigation and assessment of sources of waste aforementioned, carry out assessment of the following:

a) Current conditions of extraction of ground water within scope of impact

Tally existing extraction projects within scope of impact including name, type, location, depth, distance to the extraction project, flow, water level, extraction mode, purposes of extraction and use of water; total number of projects, total volume of extractible ground water of all the projects across extraction area and individual key aquifers.

b) Current conditions of sources of waste within extraction area.

Tally key sources of waste (*landfills, graveyards, storage of chemicals, polluted sources of surface water*) in extraction area including location, scale, nature of pollution and distance to the extraction project.

Particularly for projects of at least 3,000 m³/day & night, the risks and level of impact of existing sources of pollution on quality of water should be scrutinized.

III. Assess and determine key elements of ground water sources, current conditions of extraction, sources of waste that have great and direct impact on the extraction project, reserves and quality of water.

Chapter III

CURRENT CONDITIONS OF PROJECT, EXTRACTION OF GROUND WATER FROM PROJECT

I. Provide a general overview of current conditions of the project, extraction and use of ground water from the project over stages.

II. Provide specific description of current conditions of the project, extraction and use of ground water from the project as follows:

1. Explanations and descriptions of current conditions of the project.

a) Explain diagram of the project showing location, coordinates, depth, structure, flow, extraction mode and performance of individual drilled wells (*dug wells, lakes, galleries, open arteries, caves*) and the distance between them, accompanied by diagram of extraction area and location of the project;

b) Diagram of extraction area and location of the project should show background information (*boundaries, administrative place names, topography, river and stream network, roads, residential area...*) and thematic information (*boundaries of aquifers, location and key factors of the project and other surrounding projects that are in operation*);

- c) Explain technological process of water treatment; assess water treatment efficiency and satisfaction of requirements for post-treatment water quality;
- d) Explain monitoring activities during the process of extraction including description of the monitoring system, factors and mode of monitoring, facilities, personnel;
- dd) Explain project safeguard zones including limits, scope of safeguard zones, compliance with regulations in safeguard zones.

2. Explain extraction and use of ground water from the project as follows:

- a) Explain extraction of ground water from the project including year of commencement of extraction, flow, extraction mode over stages and at present, accompanied by diagrams of extraction;
- b) Consolidate and assess water level happenings over stages including change of mobile and immobile water level over stages, current water level accompanied by tables, diagrams of water level happenings to the time of the application for licence at each project (*drilled wells, dug wells, dug lakes, galleries, open arteries, caves*).
- c) Consolidate and explain water quality happenings during the process of extraction including change of water quality, increase in pollution indicators, contents of pollution indicators, stability of water quality indicators.

III. Assess and determine key issues related to current conditions of the extraction project, change of water level, water quality, extraction and use of water until the time of application for licence.

Chapter IV

ASSESSMENT OF IMPACTS OF PROJECT ON WATER SOURCES, ENVIRONMENT, OTHER EXTRACTION PROJECTS AND PLAN FOR EXTRACTION AND USE OF GROUND WATER DURING PROCESS OF APPLICATION FOR LICENCE

- I. Provide a general overview of impacts of the extraction project on sources of water, environment and other extraction projects, and plan for extraction and use of ground water
- II. Consolidation and assessment of specific impacts of ground water extraction on sources of water, environment and other extraction projects shall include following:
 - 1. Analyze and assess impacts of extraction of ground water from the project on a decline in water level, water reserves in extraction area.
 - 2. Analyze and assess impacts of extraction of ground water from the project on subsidence, increase in pollution, saltwater intrusion into aquifers and surface water flows.

3. Analyze and assess impacts of extraction of ground water from the project on a decline in flows, water level, change of quality of ground water from other extraction projects within the scope of impact of the project.

4. Provide specific explanations of measures and their feasibility to minimize major impacts of the extraction project on sources of water, environment and other extraction projects; provide plans to cope with incidents during extraction and assess feasibility of such plans.

III. Present plans for extraction and use of ground water from the project in the future as follows:

1. Permissible lowering of water level

Provide data and facts to explain permissible limits of lowered water level in aquifers.

2. Calculate forecasts about lowered water level

a) For projects of at least 3,000 m³/day & night

Explain calculations of forecasts about a lowering of water level of the project including selection of reserves calculation method, mapping of permeability field, determination of boundary conditions; selection of calculation factors; determination of other extraction projects located within the scope of impact of the project to calculate interference in water level; calculation of forecasts about a lowering of water level of the project in the future with due account taken of impacts of interference by other extraction projects located within the scope of impact of the project.

b) For projects from 200 m³ to 3,000 m³/day & night

Explain calculations of forecasts about a lowering of water level including drawing a graph of relationship between flows, water level at individual wells and a forecast about lowering of water level according to the graph.

c) Compare results of the forecasts and permissible lowering of water level to calculate and ensure economic and technical efficiency for continued extraction in the future.

3. Explain plans for extraction of ground water in the future:

a) Explain demand and purpose of water use; make a diagram of water use by month, year and stages of extraction;

b) Explain extraction factors of the project including flows, immobile water level, mobile water level and extraction modes of individual projects (*drilled wells, dug wells, dug lakes, galleries, open arteries, caves*) in the future;

c) Explain plans for monitoring extraction of ground water from the project in the future including substantiation of addition of a monitoring work (*if any*); plan for arrangement of

monitoring facilities and personnel or a contract for employment of an organization or individual qualified to carry out the monitoring;

d) Substantiate establishment or addition of safeguard zones, and provide relevant regulations (*if not available*).

3. Commitments of project owner

a) Take responsibility for honesty and origin of the information and figures contained in the report;

b) Comply strictly with regulations laid down in the licence if granted; technical regulations and standards in water supply; regulations on monitoring of extraction of ground water, reporting to regulatory agencies and regulations on natural resources of water; fulfill financial and other obligations according to laws.

CONCLUSION AND PROPOSAL

Annex enclosed herewith:

1. Drawing of project structure (*drilled wells, dug wells, dug lakes, galleries, ...*).
2. Other relevant documents (if any).

B. FOR PROJECTS UNDER 200M³/DAY & NIGHT

Foreword

1. Summarize information about an organization/individual as owner of the extraction project (*name and address of headquarter, business areas according to Business Registration Certificate or Establishment Decision (for an organization); full name, ID card number, place and date of issue, address according to permanent residence (for an individual)*).
2. Explain information and principal factors of the extraction project including type of project, purposes of extraction and use of water, scope of water supply and entities (water users); year of construction and operation of the project; total number of drilled wells (*dug wells/dug lakes/galleries/open arteries/caves*), total extractible volume of water from the project; aquifers or extraction depth.
3. Generalize about basic information in the report including current conditions of the project and extraction of ground water, plans for extraction.

4. Compile documents used as grounds for the formulation of reports on extraction of ground water including planning for natural resources of water and relevant water supply planning; reports and documents on investigation, assessment and monitoring of ground water carried out in extraction area; reports and figures about investigation, construction and operation of the extraction project; legislative documents, technical regulations and standards and other relevant documents.

5. Provide full description of capacity of the organization or individual which makes the report on extraction of ground water and assess satisfaction of the requirements as prescribed; lists of members involved in making the report.

I. Current conditions of the project and extraction of ground water

1. Administrative location, coordinates of zero points (*according to VN2000, central meridian, reference zone*), limits of the extraction project accompanied by a drawing showing location of extraction area and relationships with surrounding areas.

2. Explain current conditions of the project as follows:

a) Explain diagram of the project including location, coordinates, depth, structure, flow, extraction mode and performance of individual drilled wells (*dug wells, lakes, galleries, open arteries, caves*) and the distance between them, accompanied by diagram of extraction area and location of the project;

b) Diagram of extraction area and location of the project should include background information (*boundaries, administrative place names, topography, river and stream network, roads, residential area...*) and thematic information (*boundaries of aquifers, location and key factors of the project and other surrounding projects that are in operation*);

c) Explain technological process of water treatment; assess water treatment efficiency and satisfaction of requirements for post-treatment water quality (if any);

d) Explain monitoring activities during the process of extraction including description of the monitoring system, monitoring factors and mode, monitoring facilities and personnel;

dd) Explain project safeguard zones including limits of safeguard zones, compliance with regulations on safeguard zones.

3. Explain current conditions of extraction of ground water from the project as follows:

a) Explain extraction of ground water from the project including year of commencement of extraction, flow, extraction mode over stages and at present, accompanied by diagrams of extraction;

b) Consolidate and assess water level and quality happenings at the project over stages (if any).

II. Plans for extraction and use of ground water during application for licence

1. Explain plans for extraction of ground water:

- a) Explain demand and purpose of water use; make a diagram of water use by month in a year;
- b) Explain extraction factors of the project including flows, immobile water level, mobile water level and extraction modes of individual projects (*drilled wells, dug wells, dug lakes, galleries, open arteries, caves*) in the future;
- c) Explain plans for arrangement of facilities and personnel involved in activities of monitoring extraction of ground water in the future;
- d) Establish or add safeguard zones, and provide relevant regulations (*if not available*).

2. Commitments of project owner

- a) Take responsibility for honesty and origin of the information and figures contained in the report;
- b) Comply strictly with regulations laid down in the licence if granted; technical regulations and standards in water supply; regulations on monitoring of extraction of ground water, reporting to regulatory agencies and regulations on natural resources of water; fulfill financial and other obligations according to laws.

Conclusion and proposal

Annex enclosed herewith:

- 1. Drawing of project structure (*drilled wells, dug wells, dug lakes, galleries, ...*).
- 2. Other relevant documents (*if any*).

Form 35

(NAME OF APPLICANT)

(Inner cover)

**SCHEME
FOR DISCHARGE OF WASTEWATER INTO WATER SOURCE**

.....[\(1\)](#)

(In case of no structures for wastewater discharge or structures for wastewater discharge without wastewater discharge operations yet)

APPLICANT
Signature (and stamp if any)

SCHEME COMPILER
Signature and stamp

(Location and date)

GUIDELINES

DETAILS OF SCHEME FOR DISCHARGE OF WASTEWATER INTO WATER SOURCE

(In case of no structures for wastewater discharge or structures for wastewater discharge without wastewater discharge operations yet)

PREFACE

1. Present information on applicants for issuance of wastewater discharge permit (*name, address, phone number, fax, email, etc.*) and on wastewater discharge facilities (*name, location, scale, business models; in case of schemes that are in their investment phases, specify project phases and progress; in case of structures for waste water discharge, specify estimated time of initiation of wastewater production and discharge*).

2. Provide an overview on business operations of the wastewater discharge facility.

- With respect to individual business facilities: manufacturing technology, throughput, products, ingredients and materials used for manufacture.

- With respect to industrial parks/clusters, economic zones, export-processing zones and hi-tech zones (*hereinafter referred to as "industrial parks"*): introduce structures of business professions.

- With respect to fishery operations: scale of culture zones (*area of culture zones, total water surface areas; number of culture ponds and lagoons*), culture methods and techniques (*seasons, breeders, feed, medicine; chemicals, preparations and environmental protection, etc.*).

- With respect to structures for joint collection and treatment of domestic and municipal wastewater: range, scale and area of collection and treatment zones.

3. Provide an overview on water use and wastewater discharge demands: average amount of water use, average amount of wastewater discharge, greatest discharge capacity (*in m³/24 hours*); wastewater quality (*specify regulations on wastewater quality before discharging into receiving water sources, applicable coefficients*); water amount and reuse purposes after treatment (*if any*).

4. Provide an overview on wastewater collection, treatment and discharge

- Describe wastewater discharge areas (*specify wastewater collection systems to wastewater treatment structures; post-treatment wastewater transmission and discharge systems; rivers and streams where receiving waters are located; locations of adjacent spots where water is extracted, used and wastewater is discharged into the same receiving waters*); coordinates and administrative divisions of the spots where wastewater is discharged; name and administrative divisions of the spots where wastewater is discharged into receiving waters.

- Technology and capacity of wastewater treatment systems.

5. Basis of selecting receiving waters

Provide explanation for selecting receiving waters and spots where wastewater is discharged while ensuring consistency of discharge rate, post-treatment wastewater quality with use purposes of water in receiving waters and lower sections of wastewater discharge spots, hydrographical conditions of water sources, ability to receive wastewater of water sources; advantages and disadvantages of discharging wastewater.

6. Summarize measures for preventing and rectifying incidents, controlling wastewater treatment and discharge into water sources.

7. Present basis and documents used to compile the scheme

- Regulations on water resource planning, area division based on water use, area division based on water source function, area division for wastewater discharge relating to receiving waters (*if any*); irrigation, water supply and drainage planning and other plans including water resource extraction and use related to receiving waters (*if any*).

- Standards and regulations on wastewater quality and quality of receiving waters.

- Information and documents used to develop the scheme (*information and documents that are collected and surveyed, measured by the applicant*).

8. Information on organization of scheme compilation

- Methods of developing the scheme.

- Information on organization that is responsible for compiling the scheme (*name and implementation capacity*).

- List of members.

Chapter I

PROPERTIES OF WASTEWATER SOURCES

I. Activities producing wastewater

Present business operations and provide coherent explanation on water use and wastewater discharge demands, amount of wastewater collected and treated, wastewater quality during business operations with following categories:

1. Provide explanation on manufacturing processes, activities that require water and produce wastewater:

a) With respect to individual business facilities: present flow charts of manufacturing processes (*which specifies phases that use water and produce wastewater, phases that use recirculated water*); throughput, product, ingredients and materials used for manufacture.

b) With respect to industrial parks: present ratio of business lines and specify business lines that use water and produce wastewater.

c) With respect to fishery operations: present flow charts of culturing process, water use and wastewater discharge during fishery operations.

d) With respect to structures for joint collection and treatment of domestic and municipal wastewater: provide population of the areas subject to wastewater collection and treatment, business facilities situated in areas subject to wastewater collection and treatment (number, models, wastewater treatment conditions of each facility and number of issued wastewater discharge permit).

2. Calculate total water use and wastewater discharge demands (*in m³/24 hours*):

a) With respect to individual business facilities: present amount of water use and wastewater discharge of all phases.

b) With respect to industrial parks: calculate water use and wastewater discharge demands based on business professions (*including for domestic purpose*).

c) With respect to fishery operations: present amount water use and discharge during fishery operations.

d) With respect to structures for joint collection and discharge of domestic and municipal wastewater: present amount of domestic and industrial wastewater within collection and treatment scope of the structures.

3. Provide explanation for amount of wastewater to be collected and treated (*in m³/24 hours*), figures and contents of pollutants of wastewater before treatment.

II. Wastewater collection systems

Present design and allocation of systems for collecting wastewater produced during business operations and preliminary processing of wastewater, to be specific:

1. Present charts and describe waste water collection systems, collection methods and design specification of collection methods.

2. Present preliminary processing of wastewater prior to introduction to joint wastewater collection and treatment systems.

(Attached by annex containing drawings of premises of wastewater collection systems)

III. Rainwater collection and drainage systems

Present design and allocation of systems for collection and drainage of rainwater across the facilities, to be specific:

1. Present charts and describe rainwater collection and drainage systems (*specify areas of collection, rainwater ducts and rainwater drainage locations*); assess rainwater drainage capacity.

2. Present methods of controlling polluted rainwater (*if any*).

(Attached by annex containing drawings of premises of rainwater collection systems)

IV. Wastewater treatment systems

Provide clear explanation regarding wastewater treatment capacity of wastewater treatment systems (proving capacity and ability to process wastewater of the systems) with following basic categories:

1. Provide explanation for selecting wastewater treatment technology.

2. Provide an overview on operation of wastewater treatment technology (*specify basic technical specifications and treatment capacity in each phase*).

3. Prepare list of equipment installed in wastewater treatment systems (*brands, origins, etc.*).
4. Present the use of chemicals and microbial preparations in wastewater treatment (*specify name of chemicals and microbial preparations; treatment phases in which such chemicals and microbial preparations are used and use amount*).

(Attached by annex containing design drawings of wastewater treatment systems).

V. Wastewater transmission and discharge into receiving waters

Present transmission and discharge of wastewater after treatment (*from outputs of wastewater treatment systems*) to receiving waters, including following basic information:

1. Flow charts and descriptions of sewers, channels, canals, etc. for transmitting post-treatment wastewater to receiving waters.
2. Description of wastewater discharge grate (*types of construction, dimensions, materials, etc.*).
3. Wastewater discharge regimes (*specify either continuous 24-hour discharge or interrupted; discharge frequency, discharge period in a frequency; seasonal discharge or daily discharge, etc.*).
4. Methods of discharging wastewater into receiving waters (*specify either pump, natural flow, surface discharge, sediment diffusion, bank discharge, midstream discharge, etc.*).

Chapter II

PROPERTIES OF RECEIVING WATERS

I. Natural characteristics of receiving waters of wastewater

Describe natural factors related to conditions of the receiving waters, including following basic categories:

1. Geographical, topographical and meteorological factors of receiving waters.
2. Rivers, streams, canals, channels and ponds situated in vicinity of receiving waters.
3. Hydrography and oceanography of the water.
 - a) Flow during flood seasons, dry seasons, most severe dry season, lowest flow in the year and tides (*in case receiving waters are rivers and streams*).
 - b) Oceanography (*in case receiving waters are the sea*).
 - c) Water level of lakes and ponds (*in case receiving waters are lakes and ponds*).

II. Quality of receiving waters

1. Describe current conditions of receiving waters (*color, odor, development of aquatic organisms, other unusual phenomena*).
2. Assess quality of receiving waters based on analysis results of quality of receiving waters and collection results of documents and figures related to development of quality of receiving waters.

III. Water extraction and use at areas of receiving waters

Present current conditions of water extraction and use at areas of receiving waters (*specify all activities, primary purposes of extraction and use, distance and positions of structures compared to discharge spots applied for permit issuance*).

IV. Current discharge of wastewater into receiving waters

Present other activities of discharge of wastewater into receiving waters (*within a radius of 1km to 5km*) with following basic categories:

1. List entities discharging wastewater in the areas (*position and distance to wastewater discharge spots applied for permit issuance*).
2. Describe wastewater sources of each entities discharging wastewater in the areas (*manufacturing activities that produce wastewater, primary pollution figures in wastewater, flow rate and discharge regimes*).

Chapter III

ABILITY TO RECEIVE WASTEWATER OF RECEIVING WATERS

- I. Assess impact of wastewater discharge on hydrography of receiving waters.
- II. Assess impact of wastewater discharge on water quality
- III. Assess impact of wastewater discharge on aquatic ecosystem
- IV. Assess impact of wastewater discharge on other socio-economic activities.
- V. Assess ability to receive wastewater of receiving waters (this Section is not required in case of discharge to the sea, discharge with rate of less than 20 m³/24 hours and containing no toxic chemicals)

Assess use purposes of receiving waters specified above at the driest period in a year and during the highest regular discharge period.

(Procedures and methods of assessing ability to receive wastewater shall comply with applicable regulations/guidelines under Circular No. 02/2009/TT-BTNMT dated March 19, 2009 of Ministry of Natural Resources and Environment)

Chapter IV

CONTROL WASTEWATER DISCHARGE INTO WATER SOURCES

I. Methods for reducing pollution of receiving waters

Present methods for reducing pollution of receiving waters (*plans for changing manufacturing technology; water efficient technologies; water recirculation and reuse; change and upgrade to wastewater treatment systems; change of wastewater discharge methods, etc.*).

II. Prevention, response and rectification of water source pollution

Present potential accidents that pollute water sources and measures and expenditure on prevention, response and rectification of polluting accidents. In case of wastewater discharge specified in Point d Clause 1 Article 2 of Decree No. 201/2013/ND-CP dated November 27, 2013 (*structures discharging wastewater into water sources with flow rate of at least 10,000m³/24 hours*), provide measures, equipment and devices necessary to respond and rectify water pollution.

III. Monitor and supervision of wastewater discharge

1. In case of wastewater discharging structures

a) Present measures, frequency and location for monitoring wastewater discharge rate prior to discharging into receiving waters.

b) Present measures, frequency, figures and location for monitoring wastewater quality before and after treatment; quality of receiving waters.

c) Present allocation of equipment, personnel, expenditure on operation and maintenance of wastewater treatment systems, systems for monitoring flow rate and quality of wastewater and receiving waters (if the discharge facilities operate and monitor by themselves); or contracts for hiring organizations and individuals operating wastewater treatment systems, systems for monitoring flow rate and quality of wastewater and receiving waters (if the discharge facilities hire other organizations and individuals to operate and monitor).

2. In case of no wastewater discharging structures

a) Present methods of monitoring wastewater flow rate and quality before and after treatment; quality of receiving waters.

b) Present measures for allocating equipment, personnel and expenditure on operating and maintaining wastewater treatment systems, systems for monitoring flow rate and quality of wastewater and receiving waters.

CONCLUSION, PROPOSITIONS AND COMMITMENT

- Conclusion: ability to collect and treat wastewater; current conditions of water sources and ability to receive wastewater of water sources.

- Proposition: permit discharge of wastewater into water sources, flow rate and quality of wastewater, location of discharge, receiving waters, validity of wastewater discharge permits.

- Commitments: discharge wastewater according to issued permits; adopt measures to reduce pollution, respond and rectify pollution; pay damages in case of deliberate or accidental pollution; monitor and supervise wastewater discharge operations.

Annexes attached to the Scheme:

1. Analysis results of receiving water quality (*specimen for water quality analysis must be collected within 3 months before the date on which applications are submitted*) together with documents providing location of specimen collection (*in case specimen is collected at lower section of discharge locations*) and description of specimen collection conditions (*weather, water conditions and surrounding waste discharge sources*).

(*Analytic figures of receiving waters are figures according to applicable Vietnam Standards on quality of surface water or coastal waters in case of wastewater discharged into coastal waters*).

2. Documents on planning of water resources, area division of water based on use purposes and division of areas for wastewater discharge approved by competent agencies of areas where receiving waters are situated (*if any*).

3. Drawings of wastewater and rainwater collection and drainage systems.

4. Reports on explanation and drawings for design of wastewater treatment systems.

5. Contracts for hiring organizations and individuals to operate wastewater treatment systems and monitor wastewater discharge operations (*in case of hiring other competent organizations and individuals capable of operating and monitoring*).

[\(1\)](#) Specify name of the project, location and extraction flows

[\(1\)](#) Specify name and address of the facility and scale of wastewater discharge

*This translation is made by **LawSoft** and for reference purposes only. Its copyright is owned by **LawSoft** and protected under Clause 2, Article 14 of the Law on Intellectual Property. Your comments are always welcomed*