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The Drilling Permit as a Protection Mechanism for Water Resources

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Abstract:

The drilling permit is a crucial mechanism for providing legal protection specific to an area or subject. Its significance is highlighted through regulatory procedures, especially the measures aimed at safeguarding water as a sustainable resource. This involves establishing a series of conditions that the applicant must fulfill, as well as requirements related to the drilling site and other relevant aspects.

Keywords: Drilling permit; water; protection mechanism; water resources; usage.

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الملخص:

تعد الرخصة من أهم الآليات للحماية القانونية المقررة لموضوع أو مجال ما، وهو الشأن بالنسبة لرخصة الحفر، حيث تتجسد من خلال إجراءاتها التنظيمية و بخاصة مجالات الحماية الموجهة للماء باعتباره ثروة مستدامة وجب الأمر إحاطة التنقيب و الحفر للبحث عنه بجملة من الشروط الواجبة التوافر في طالب الرخصة من جهة ، ومن جهة ثانية في موقع الحفر وبعض الجوانب الأخرى.

الكلمات المفتاحية: رخصة حفر، المياه، آلية حماية، موارد مائية، استعمال.

1. INTRODUCTION

There is no doubt that water resources, in all their forms, constitute a vital element that must be protected and preserved. This necessity stems, firstly, from the legal nature of their ownership, as water resources are the property of the national community; and secondly, from the fundamental importance and indispensable role these resources play in the life of all individuals.

Among the most pressing legal issues is the matter of water resource usage, a subject addressed by the legislature through the establishment of a legal framework governing such use, defining its scope and procedures. According to water legislation and its implementing

regulations, the use of water resources is only permitted through a license or a concession.

The drilling license is a legal instrument that enables the use of water resources in compliance with applicable laws and regulations. It forms part of a broader strategy for rational water management, aimed at conservation and sustainable use. This includes quantitative protection by controlling resource extraction and ensuring long-term availability, particularly in regions with limited or vulnerable water supplies.

From this context emerges the following problem: *How does the drilling license contribute to the protection of water resources?*

Section One: The Nature of the Drilling License

In Algeria, the use of water resources is governed by specific legal instruments established by national legislation. The law requires that all users, regardless of their legal status, obtain either a license or a concession. This study focuses on the first of these instruments: the license to use water resources, paying particular attention to the drilling license. The analysis will begin by defining the general concept of an administrative license, followed by a detailed examination of the drilling license as a specific form of water use authorization.

Subsection One: The Concept of the Administrative License

In this subsection, we will discuss the general definition of the administrative license, its characteristics, and its purpose.

Part One: Definition of the Administrative License

The license is also seen as a means through which the state intervenes in individual activities to prevent potential harm. It enables administrative bodies to implement necessary precautions to avert such harm. Additionally, the administration may deny permission to engage in a specific activity if the required precautions are insufficient to prevent harm or if the activity does not meet the legal conditions set by the legislator.

The administrative license takes on various forms and designations—such as accreditation, visa, authorization, and the most common, administrative license. It has wide-ranging applications in administrative practice and acts as a legal tool through which public authorities regulate and oversee individual activities, certain freedoms, or the private use of public resources property

This type of license is one of the key mechanisms by which the state intervenes in individual conduct to prevent potential harm. It enables

administrative bodies to impose necessary safeguards aimed at minimizing risks. Moreover, the administration may deny permission to engage in a given activity if the proposed safeguards are considered insufficient or if the activity fails to meet the legal requirements prescribed by the legislature. An administrative license is commonly defined as: "A permit issued by the competent administrative authority authorizing the exercise of a specific activity. It constitutes a unilateral legal act adopted by the administration within the limits of its jurisdiction and discretionary power." Accordingly, the administrative license is a legal mechanism that allows the administrative authority to exercise both prior and ongoing oversight of individual activities. As such, it functions as a preventive tool for maintaining public order, ensuring that individual rights and freedoms are exercised within legal boundaries. It also serves to protect the public interest by mitigating potential risks posed by private actions.

Part Two: Characteristics and Purpose of the Administrative License

In light of the above, the administrative license can be distinguished from other similar legal instruments through a set of specific characterist

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which can be summarized as follows[1]

- The administrative license is a unilateral legal act of an administrative nature.
- It constitutes a legal document, issued by an official authority, usually in formal written form, and can be presented and invoked later against both the issuing authority and third parties.
- The administrative license may be either permanent or temporary, depending on the specific type of license.
- It carries executive force (binding legal effect).

The primary objective of a licensing regime is to allow administrative authorities to intervene preventively in individual activities by implementing necessary safeguards that protect both the environment and public health from the risks associated with unsafe practices. Accordingly, the licensing system operates by lifting the general legal prohibition on certain potentially hazardous activities, identified as such by the legislator, and subjecting them instead to prior authorization. This mechanism

[1] - Abdelrahman Azzaoui,2021,P166

serves not only as a form of regulatory control but also as a way to protect a range of public and private interests, including:

- Public safety.
- Elements of the environment, such as in the case of hunting or water-related licenses, as will be discussed later.
- Public health, as in the case of licenses related to the exploitation of water resources or the establishment of public projects[2].

As previously noted, the administrative license is a unilateral legal act, like other administrative decisions, with a clearly defined start and an eventual end. Its entry into force is marked by the fulfillment of all necessary legal elements, while its termination may occur for various reasons, depending on the circumstances. The license may expire for legal or factual reasons unrelated to the issuing authority, such as the natural expiration of its term or events affecting the beneficiary, including death. In other cases, termination may result from the legal framework governing the licensed activity.

Additionally, the issuing authority may terminate the license itself, either through administrative withdrawal or cancellation before its

[2] -Kharmouch Ismahan,2015,P 101

expiration. Such actions are usually taken in response to valid reasons, most often due to the beneficiary's breach of the conditions or obligations under which the license was initially granted.

Section Two: The Concept of a Drilling Permit

The issue of water management is of significant importance, as demonstrated by the emphasis placed on it by the constitutional legislator. The Constitution affirms that water resources are part of the national community's public property. It also enshrines the protection of water and establishes the State's responsibility to ensure its sustainable and rational use. Additionally, legislative provisions classify water as part of the natural public domain, making its preservation and protection necessary under public law.

Subsection One: Definition of the Drilling Permit

To define a drilling permit, it is important first to note that the Algerian legislator considers it one of the mechanisms for regulating and

controlling the use of water resources. The aim is to preserve water quantities and combat wasteThe law stipulates:[3]

"No use of water resources, including those intended for agricultural use or non-conventional waters, by natural or legal persons governed by public or private law, through water extraction facilities or for aquaculture purposes, may take place without a permit or concession issued by the competent authority under the provisions of this law and its regulatory texts."[4]

Water Law defines a permit in Article 74 as follows:

"The permit for the use of water resources, which is considered a contract under public law, is granted to any natural or legal person subject to public or private law, upon request and under the conditions specified by this law and its implementing regulations."

It is worth noting that the Algerian legislator does not provide a comprehensive, detailed definition of the permit for water use. This, in principle, does not fall within the legislator's direct responsibility. Instead, the law offers a legal characterization of the permit, outlines the

[3] - Abdelrahman Hezreshi, 2017, P81
[4] - Article 71 of Law No. 05-12 of 04/08/2005

necessary conditions for its issuance, and establishes the legal framework it must comply with. **(Salim Karbouche,2019,P102)**

Accordingly, the drilling permit constitutes an act governed by public law—essentially an administrative decision unilaterally issued by the competent authority within the scope of its discretionary powers. It does not arise from negotiation or mutual consent, as it pertains to the regulated use of national public property. Since water is classified as part of the natural public domain, its use requires prior authorization in the form of a permit, as well as the payment of legally prescribed fees. Administrative authorities charged with managing national public assets are empowered to take all necessary measures to ensure their protection, sustainable use, and proper oversight.

In terms of substantive scope, the Water Law enumerates the activities subject to a usage permit, including:[5]

- Drilling wells or boreholes to extract groundwater.
- Creating non-commercial exploration structures for water sources.
- Constructing infrastructure for diversion, pumping, or collection of surface water, excluding dams.

[5] - (Article 75 of the Water Law)

- Establishing any other structures for the extraction of surface or groundwater.

Thus, it is necessary to precisely define both **groundwater** and **wells**, as they constitute the object and subject matter of the administrative permit request.

1.Groundwater

Groundwater represents a vital component of natural public property resources. It refers to water located beneath the Earth's surface, stored in the pores and fractures of geological formations. Most commonly, it is found in rock layers with high porosity and permeability—known as aquifers—which are distributed unevenly across geographic regions and typically contain limited quantities of water.

Groundwater flows slowly through subsurface layers along gradients defined by geological strata and land topography, rising or falling accordingly. In many cases, it contributes to surface water systems by feeding rivers and streams, particularly in low-lying valley areas. It may also emerge naturally at the surface as springs, especially in regions of low elevation.

A defining characteristic of groundwater is that it usually lies entirely within national borders, making it a domestically governed water resource. This territorial confinement facilitates its regulation by national authorities through domestic legislation. Furthermore, groundwater can often be accessed directly at the source without the need for complex transportation or distribution infrastructure. These features make it one of the most important sources of freshwater—particularly in contexts of increasing demand for irrigation and drinking water, and amid growing shortages of surface water caused by drought and pollution.

Groundwater is stored in underground reservoirs and reaches the surface either naturally (via springs) or through human intervention, in which case the access points are known as **wells**.

2. Wells

Once the presence of groundwater is confirmed through exploratory drilling, wells can be constructed. Well-drilling remains one of the most widely employed methods for groundwater extraction. Wells are typically classified based on their depth and the technologies used to extract water.

- **Shallow wells**, usually less than 30 meters deep, tap into upper groundwater layers. They yield relatively small volumes of water and are more susceptible to contamination due to their proximity to the surface. They are also more vulnerable to seasonal variations and drought.
- **Deep wells** are used for large-scale irrigation or for supplying potable water to human settlements. These wells access deeper aquifers, deliver larger water volumes, and are generally less prone to surface contamination.
- **Artesian wells**, which are exceptionally deep, access confined aquifers under pressure. Extracting water from these wells requires strict regulatory oversight to ensure sustainability, avoid over-extraction, and prevent aquifer depletion.

In all cases, adequate spacing between wells is essential to prevent excessive drawdown of the water table, inter-well interference, or drying of nearby sources.

Given that drilling involves removing and excavating earth to access what lies beneath the **drilling permit** may be defined as:[6]

A permit issued by the competent administrative authority through a unilateral decision (typically the provincial governor with the

[6] - Al-Munjid,2001,P301

assistance of departments in charge of public water assets, such as the Directorate of Water Resources), authorizing the use of water resources through drilling and exploration to construct wells or extract groundwater. This applies to both public and private legal entities, subject to the conditions and requirements imposed by current legislation and regulations.

Subsection Two: Characteristics of the Drilling Permit

By referring to the provisions of the Water Law and by analogy with the general provisions governing the use permits for water resources, the following characteristics and legal implications of the drilling permit can be identified:

- **It is mandatory**: No well may be drilled, nor groundwater extracted, without obtaining the permit in advance.
- **It is a regulatory legal measure** issued by the competent administrative authority through a formal decision.
- **It constitutes a contract under public law**.
- **It is a unilateral administrative contract**, meaning it is issued by the authority without negotiation.
- **It is available to both public and private legal persons** without exception.

- **It is expressly temporary by law**, granted for a defined period, based on the available overall water resources and in accordance with the volume and level of water authorized. This aligns with assessed needs and average annual consumption rates.
- **It is subject to specific regulatory conditions**, determined by implementing regulations.
- **It entails the payment of fees**, as prescribed by the Finance Law.

The licensing system serves as a preventive legal mechanism designed to protect water resources in both quantity and quality, an especially critical function in light of Algeria's vulnerability to water scarcity. It provides a framework for effective oversight, particularly in cases involving the use of non-renewable or slowly recharging groundwater reserves. Within this framework, the drilling permit stands out as one of the most frequently issued and vital authorizations for water use. It represents a key legal instrument enacted by the legislature to regulate, conserve, and ensure the sustainable management of groundwater resources.

Chapter Two: Procedures for Obtaining a Drilling Permit and Its Legal Effects.

Given the importance of administrative permits in the field of regulatory administration and the organization of various legal matters,

such permits are generally subject to provisions governing the conditions and procedures for their issuance, along with the resulting legal effects. This also applies to the drilling permit, which is regulated by Algerian law in terms of the conditions for its issuance and its legal implications, as will be addressed in the following sections.

Section One: Procedure for Obtaining a Drilling Permit

Article 74 of the Water Law refers the procedures for granting permits for the use of water resources to the implementing regulations. Accordingly, an executive decree was issued to clarify this process [7]

The provisions of this decree require the applicant to submit a formal request to the **Water Resources Department of Wilaya**, which must mandatorily include the following information and supporting documents:

- The **identity and address** or registered office of the applicant.
- **Proof of legal occupation** of the land designated for the construction of water extraction facilities, established by an official contract.

[7] - Decree No. 08-148 of 21/05/2008

For lands owned by the **municipality or the state**, the applicant may justify occupation by presenting any document issued by the relevant municipal or agricultural authority that confirms use and occupation. This document does **not constitute a title of ownership**, but rather serves as a **certificate of occupation**. Accordingly, a drilling permit granted on this basis **does not confer ownership rights** over the land, nor does it affect the rights of others in any way.

- The **nature, geographical location, and site plan** of the proposed water extraction structure or facility, which must fall within the legal and substantive scope of water resource usage permits.
- The **anticipated duration of the construction works**.
- The **volume and/or level** of water to be extracted.
- The **intended period of water resource usage**.
- The **intended use(s)** of the extracted water.

The permit application is subject to a **technical instruction (or technical study)** prepared by the Water Resources Department of the Wilaya, based on the following:[8]

[8] - Executive Decree No. 08-148

- Verification of water resource availability, taking into account previously granted usage rights as well as current and planned public development projects.
- Site inspection to assess the conditions of the proposed structure or facility and the related use of the water resource.
- Consultation of relevant bodies responsible for the **integrated management and evaluation** of water resources, including:
    - The National Agency for Water Resources (ANRH)
    - The National Agency for Integrated Water Resources Management (AGIRE)
    - Departments of Fisheries, Agriculture, and Environment

Based on the findings of this **technical study**, the water resource usage permit is granted by **decision of the Wali (Governor)**. This decision must include the following[9]:

- Full names, addresses, and where applicable, the company name of the applicant
- The **maximum volume or level** of water that may be extracted
- The **intended use(s)** of the extracted water
- The **duration of the permit's validity**, which is a **maximum of 10 years** for groundwater resources and **5 years** for surface water
- The **duration and technical conditions** for executing the works

[9] - Executive Decree No. 08-148

- The **conditions for operation and maintenance** of the facilities
- The **mandatory installation of water metering devices**
- The **obligation to pay royalties or fees**, as required by law

The administration is required to process the permit application within **one month** from the date of submission. Based on the **technical study** or any other relevant data regarding the applicant's justification or the available water resources and the necessity of protecting them, the administration **has the right to refuse the permit**. However, such refusal **must be justified and reasoned**, and the decision must be **formally communicated** to the applicant

The detailed documentation required in a permit application, along with the technical study to be conducted by the Water Resources Department based on clear criteria and broad stakeholder consultation, reflects the legislator's intent to establish a rigorous procedural and technical framework. When properly implemented, this framework ensures that drilling permits are issued in alignment with the overarching objective of protecting and sustainably managing water resources. Conversely, the refusal to grant a permit can equally serve this objective—particularly when it is supported by systematic,

unannounced site inspections that strengthen monitoring and enforcement mechanisms.

Section 2: Consequences of the Drilling Permit

The drilling permit, as a license for the use of water resources, gives rise to a series of legal effects for both the applicant and the issuing administration.

Subsection 1: For the Beneficiary of the Permit

For the applicant, upon the issuance of the governor's decision granting the drilling permit, a vested right is established, which allows the applicant to use water resources (drilling and extraction) legally, within the limits specified by the drilling permit decision[10].

The beneficiary of the permit has the right to manage, for a specified period (the validity of the permit), the volume or flow of water determined based on the available total resources, according to the annual average and the needs corresponding to the intended use. This is in exchange for royalties paid to the public treasury.

[10] - Salim Karbouche,2019,P104

However, the beneficiary must begin the work within the stipulated time frame, which should not exceed 18 months from the date of notification of the permit. This period can be extended by an additional six months, based on legal justifications.

The beneficiary is also required to use the water rationally and economically, and only for the licensed purpose. They must comply with any interventions or inspections by the administration's water resource management agents, while continuing to pay the royalties.

Although the Algerian legislator, when setting the royalties, focused on what results from the exploitation rather than the mere use of water (despite Article 73, which falls under the chapter titled "Use of Water Resources"), it is believed that these royalties and their collection in the context of the drilling permit may present practical challenges due to the overlap of these matters, as previously noted.

The beneficiary of a drilling permit has the right to request its renewal, provided that the request is submitted in advance, at least six months before the permit's expiration. Modifications to the permit may also be requested; however, such changes are subject to the same

conditions and procedural requirements as those applicable to the initial issuance of the permit.

As previously indicated, the competent administrative authority retains the right to refuse the issuance of a permit, provided that the refusal is duly reasoned and justified. In the event of a refusal, the applicant may file an administrative appeal (réclamation) within ten (10) days of being notified, by submitting a complaint to the regional directorate of water resources. The directorate is required to issue a decision on the appeal within fifteen (15) days.

Regardless of the outcome of the administrative appeal, the applicant also retains the right to initiate judicial proceedings by filing an *action en annulation* (annulment action) before the competent administrative court in the relevant jurisdiction, challenging the legality of the refusal decision.

Subsection 2: For the Issuing Administration

The law grants the issuing administration various powers and procedures in the exercise of its responsibilities, particularly in the administrative control over the use and protection of water resources.

The administration can refuse the application for the permit, provided the refusal is reasoned and justified.

Furthermore, the administration granting the drilling permit has the authority at any time to modify, reduce, or revoke the permit for the use of water resources (drilling) when deemed necessary for public benefit. In such cases, the administration is required to provide compensation to the beneficiary if direct damage occurs, based on the terms specified in the permit or in the terms of reference[11]

The administration may also resort to temporary suspension, modification, reduction, or revocation of the drilling permit in cases where the terms and obligations imposed by the legal framework for the use of water resources are not respected, particularly in the following circumstances:

- If water wastage is proven legally, regardless of the reason,
- In case of drought, to limit water use in response to disasters and to prioritize water allocation,
- If work has not begun within two years from the date of notification of the permit,

[11] - Article 86 of the Water Law

- If the construction of facilities and structures does not comply with the technical documentation and the legal standards and regulations,
- If water is used for purposes other than those authorized,
- If the works are not completed within the specified deadlines.

Subsection 3: Consequences of Drilling Without a Permit

Drilling without a permit is considered a criminal act under the law, as it involves carrying out the operation without the necessary technical documentation or consideration of the legal limits for water resource protection. This unauthorized drilling can lead to the extraction of increased amounts of groundwater, potentially affecting the water levels of these layers. Such areas are subject to legal protection.

Article 32 of the Water Law stipulates that within the protected zones:

- No new wells or drillings may be created, nor any modifications made to existing facilities that could increase the amount of water extracted,
- All works for replacing or reconditioning existing irrigation facilities are subject to authorization from the administration responsible for water resources,

- The administration may establish limits on the amount of extraction at certain points or suspend extraction altogether.

Therefore, the Water Law provides both administrative and criminal protection for water resources, alongside its regulatory framework for usage. Article 174 of the Water Law states that anyone who drills or extracts groundwater without a permit will be punished by imprisonment for a period of six (6) months to two (2) years and fined between one hundred thousand dinars (100,000 DZD) and five hundred thousand dinars (500,000 DZD). Additionally, the law provides for the confiscation of equipment and machinery used in the commission of this violation[12]

Conclusion:

Various legislative frameworks have granted administrative authorities powers over water resource regulation, particularly in relation to the use and allocation of such resources. The Algerian legislator has instituted a legal regime whereby the use of water resources is strictly conditioned upon prior authorization, either through a permit (*autorisation*) or a concession (*concession*). As examined, Algerian water

[12] - Hanane Missaoui,2017,P306

legislation addresses the drilling permit as a specific form of water use authorization, with regulatory texts outlining the procedures for application, the conditions for issuance, and the technical and explanatory data required.

The drilling permit operates as a **preventive administrative mechanism**, constituting one of the most critical decisions rendered by the administration in the field of water governance. It contributes to the protection, preservation, and sustainable management of water resources, which are classified as public property.

Nevertheless, despite the legal progress made, **several shortcomings remain** within the existing regulatory framework, particularly concerning the governance of water use through drilling. To address these gaps, the following recommendations are proposed:

1. **Codify specific and detailed provisions governing drilling permits** to eliminate ambiguities and legal gaps.
2. **Clarify the distinction between the legal concepts of water use (*usage*) and water exploitation (*exploitation*)**, in order to determine their respective legal consequences.

3. **Ensure a precise and consistent legal definition of water resources** within both primary legislation and its implementing regulatory texts.
4. **Promote the digitalization of the water sector**, particularly through the integration of geospatial technologies (e.g., national geodesy systems) for real-time remote monitoring and management.
5. **Foster a national culture of water conservation** through continuous public awareness campaigns, educational initiatives, and the involvement of all stakeholders in the sustainable use of water resources.
6. **Reinforce deterrent legal measures** against violations impacting water resources, including unauthorized drilling, pollution, and wasteful practices.

These recommendations aim to consolidate the legal and institutional framework for water governance in Algeria, ensuring the **effective and equitable protection of groundwater and other vital resources** for present and future generations.

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