

Work Package 3
Construction of pilot installation
Deliverable 3.6.2
Installation of procured equipment/technical works

Beneficiary 6 (PB6) - Municipality of Petrich

**INTERREG V-A COOPERATION PROGRAMME:
GREECE – BULGARIA 2014-2020**

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1. Summary

The main activity for the municipality of Petrich in the GREEN PUMP project is the construction of a pilot drilling well - a drilling well for non-drinking water in the area "The Church", in the land of the village of Kavrakirovo, Petrich municipality - a new facility with the technical name "TK-1 tube well with shaft"

2. Expertise on engineering issues concerning hydrological studies/reporting, measurements needed for issuing a groundwater extracting&use permit acc. to Ordinance No. 1 on exploration, use and protection of groundwater

On October 20, 2017 the Municipality of Petrich submitted an application for issuing a permit for abstraction of groundwater through new facilities.

On November 24, 2017 the West Aegean Region Basin Directorate in the town of Blagoevgrad sent instructions, due to changes in Ordinance No. 1 for exploration, use and protection of groundwater, which the Municipality of Petrich must comply with within 2 months.

Due to new requirements in Ordinance No.1 on exploration, use and protection of groundwater, after the conceptual design has been developed, a new technical expertise in WP 3.6.2 was included for carrying out some hydrological studies/ for the issuance of a permit for groundwater extraction and use.

Some of the instructions were implemented within the deadline, but the implementation of three points, namely:

- 1. Justification of the minimum water quantity, in which it is possible to execute the activities in the site that will be supplied with water - Art.156, para 3, item 2 of Ordinance 1 for groundwater exploration, use and protection;
- 2. Table with type and volume of the envisaged groundwater exploration activities in the process of construction of the facility - Article 155, para 3, item 3 of Ordinance 1 for groundwater exploration, use and protection;
- 3. Report on the implementation of hydrogeological studies, since within the radius of one kilometer from the site of the requested water abstraction no other permits

for water abstraction were issued from the underground water body "Cracked waters in Vlachino-Ograzhdensko-Maleshevo-Osogovo metamorphites with code BG4G56PIPz.1z 3, item 4 of Ordinance 1 for groundwater exploration, use and protection

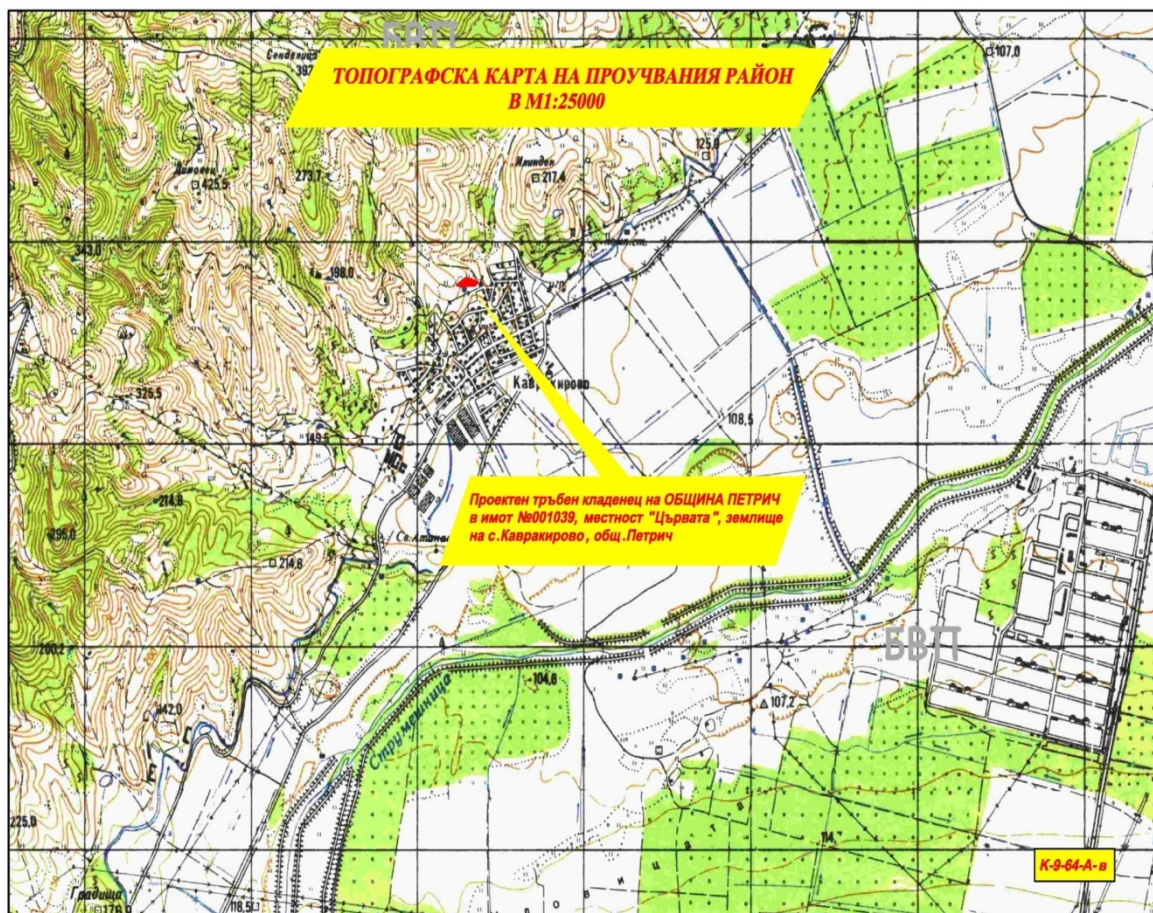
had to be associated with the execution of hydrological studies of the terrain / justification for water abstraction and the preparation of draft documentation for the issuance of a permit for groundwater abstraction.

As the two-month deadline was insufficient for technical and physical implementation, the Municipality of Petrich requested an extension of the deadline, which was denied by the respective authorities by a letter dated 05.02. 2018 and the procedure was not open

This forced the entire procedure to start over again.

- On the 31.05.2019 the Municipality of Petrich signed a contract for the implementation of technical services related to hydrological studies/justification of water abstraction and preparation of draft documentation for issuing of permit for water abstraction from groundwater, through a new water-ground facility under the Water Act, with the aim of building a well for non-potable water in the allocated site in the land of Kavrakirovo village with HYDRORESOURCE LTD. (*Deliverable 3.6.2. Expertise on engineering issues concerning hydrological studies/reporting, measurements needed for issuing a groundwater extracting use permit acc. to Ordinance No. 1 on exploration, use and protection of groundwater(Mod.) (Added)*)
- After the execution of the contract all necessary documentation was handed to the Municipality of Petrich.

Topographic map of studied area in scale M1:25000



Hydrological studies/justification of water abstraction



3. Installation costs - Works

After the permit has entered into force, a contract is signed for engineering – design, author’s supervision and works with V I K Ltd for the construction of a drilling well for non-potable water in the site named “The Church”, in the land of Kavrakirovo village in the implementation of project "Groundwater REsource management for non-Potable water pUrposes, baseMent protection, and heating - Pilot applicatio under the INTERREG V-A Cooperation Programme Greece – Bulgaria 2014-2020, Priority axis 2:" Sustainable and climate-resilient cross-border region“ with acronym:" GREEN PUMP“ to a total value of 42 250 euros. (Deliverable 3.6.2. Installation costs (refer to Bill of Costs and Quantities)

After the preparation of the works design, the plans were submitted for approval by expert council. After they have been approved, a construction permit was issued on 07.10.2019. The permit entered into force on 24.10.2019 and the construction activities started at the site.

Works at the site





Interreg Greece-Bulgaria

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The mounted renewed info sign at the site



4. Conclusions

The design was developed based on:

1. Technical task
2. On the basis of the cadastral card
3. Site survey with the necessary geodetic measurements

The current design has been developed and fully taken into account with the submitted cadastral card of the site. The construction provides a solution to a tube well (TK-1) with a shaft. The purpose of water withdrawal from the tube well is for irrigation of land municipal property with identifier 35081.1.39, locality "The church" acc. to cadastral card of the village of Kavrakirovo, Municipality of Petrich, region Blagoevgrad.

The object is the 5th category acc. to Spatial Planning Act.

Regulations

The following materials were used in the development of the working project:

- Ordinance No. 4 on the scope and content of investment projects dated May 21, 2001 /amend. DV. No. 44 of June 2, 2017/;
- Water Law /amend. and add. DV. No. 25 of March 26, 2019/;
- Ordinance No. 1 of October 10, 2007 on exploration, use and protection of groundwater /amend. and add. DV. no. 102 of December 23, 2016/
- Ordinance No. Iz-1971 of October 29, 2009 on construction and technical rules and norms for ensuring safety in case of fire /amend. and add. DV. No. 63 of July 31, 2018/
- Order No. RD-02-14-256 of 31.05.2004 of the Ministry of Internal Affairs and Communications, DV no. 52 of 2004 - for categorization of AT /administrative-territorial units/ and TE /territorial units/
- Ordinance No. 2 of March 22, 2005 on design, construction and operation of water supply systems /amend. and add. DV. No. 45 of June 14, 2016/

- Ordinance No. 8 of July 28, 1999 on rules and norms for the placement of technical wires and facilities in populated areas /Official State Gazette No. 2 of August 13, 1999/
- Hydrogeological study and prepared project plans for tube well "TK-1"
- Climatic reference book of the Republic of Bulgaria;
- Ordinance No. 2 of March 22, 2004 on the minimum requirements for health and safety at work during construction and assembly works /amend. and add. DV. No. 90 of November 15, 2016/
- Geodesic survey of the tube well on the property
- Ordinance No. 4 of June 17, 2005 on the design, construction and operation of building plumbing and sewage installations / Pub. DV. No. 53 of June 28, 2005, amended DV. No. 56 of July 8, 2005/
- Permit No. 41520106/25.09.2019 for water abstraction from underground waters, through new water abstraction facilities with the holder Petrich Municipality, issued by the director of the Basin Directorate "West White Sea Region", Blagoevgrad.