

"Resource potential and monitoring network of "Lvivvodokanal", opportunities for cooperation with the "EU-Waterres" project



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Urządzenie programujące

- Skanowanie kanałów
- Wybierz kanały
- Wybierz tryb startu / Ustaw czas startu
- Ustaw prędkość rejestracji
- Ustawienia urządzenia
- Rejestracja sterowana poziomem wody / zdarzenia
- Prędkość detekcji zdarzeń
- Typ zdarzenia
- Prędkość rejestracji przy zdarzeniu
- Zapisz konfigurację do urządzenia
- Konfiguracja poziomu wody 1**
- Konfiguracja poziomu wody 2

Diagram: Poziom odniesienia (Horizontal reference). Shows a sensor probe in a well. B is the distance from the sea level to the probe tip. F is the depth of the water. $Powierchnie$ is the water surface. $Poziom morza$ is the sea level.

Configuration parameters:

- Aktywuj konfigurację poziomu wody
- Kwersja na: [dropdown]
- Głębokość wody (F): [dropdown]
- Wysokość instalacji: 5,68 m
- Wysokość głowicy nad poziomem morza: 0,000 m
- Ofset: 0,000 m
- Gęstość: 998,200 (kg/m³)
- Pokaż wykres poziomu wody
- < Wstecz | Zapisz konfigurację

Table:

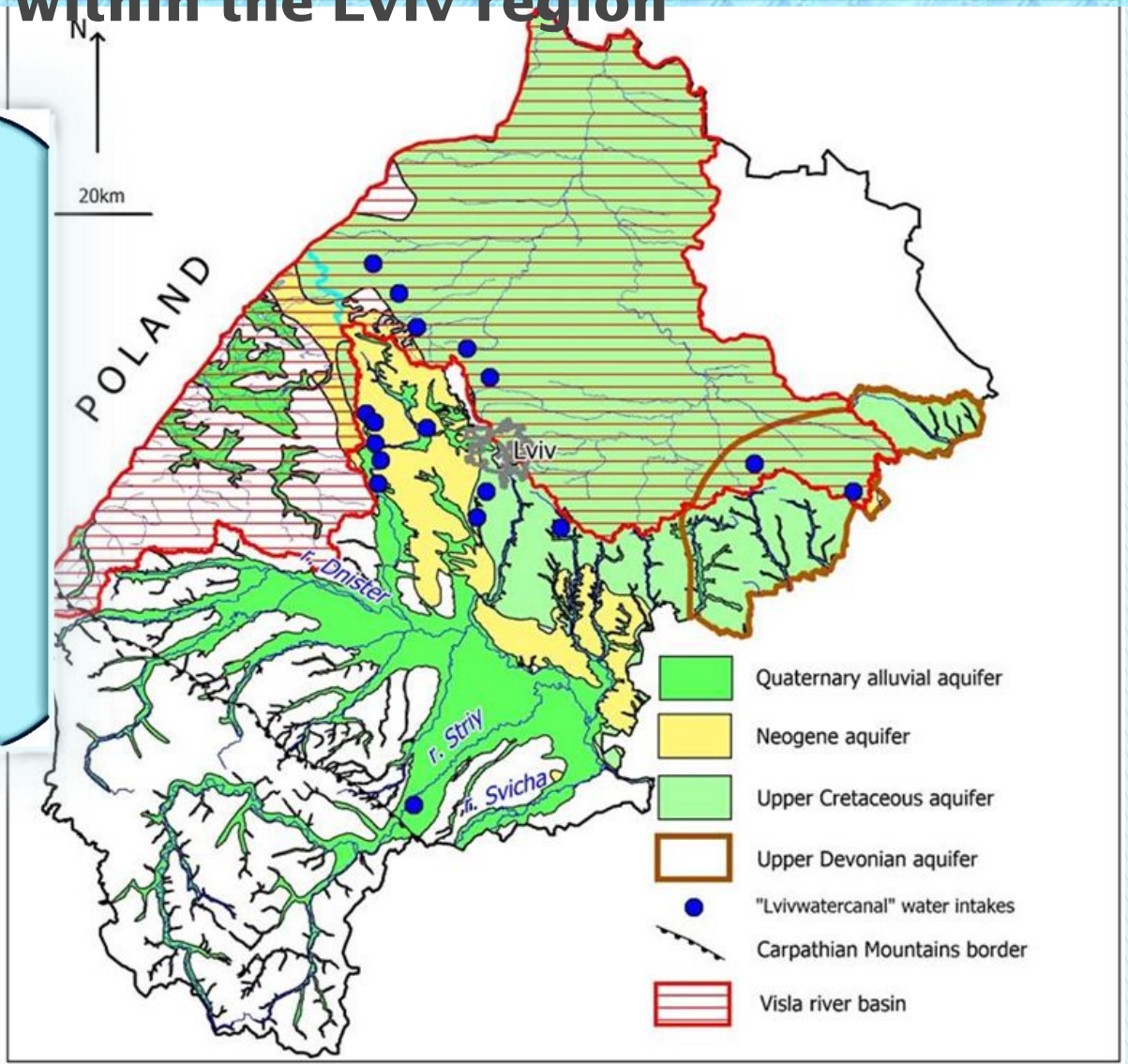
Port COM	Urządzenie	Tożsamość	urządzenie wykryte	Aktywuj
5	DCX Class 5 Group 5 Year.Week 16.9 SN : 1391515		2023-03-13 11:34:45	Aktywuj

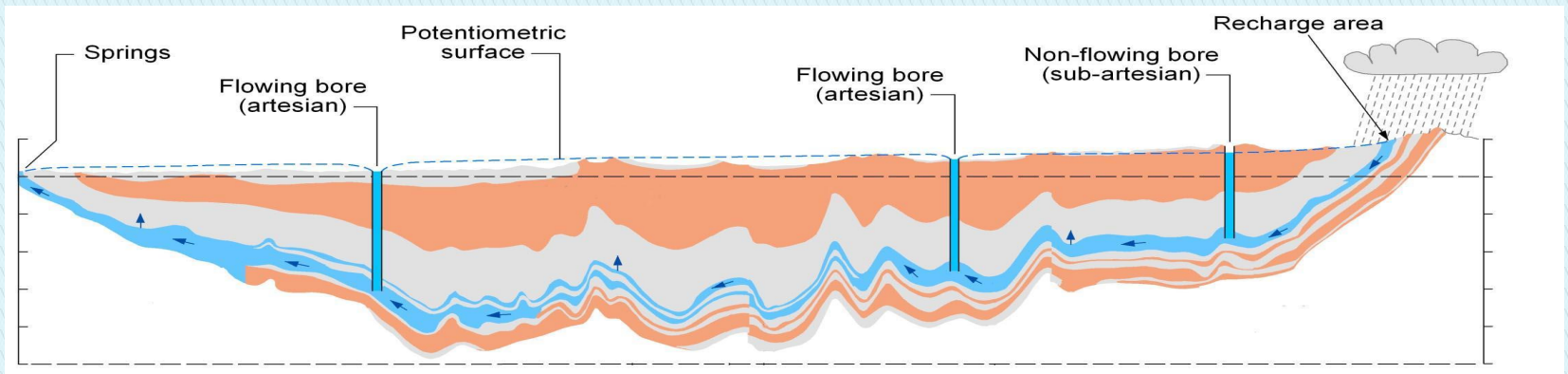
System status: Pamięć 4MBit | Maksymalny czas rejestracji 7 y - 1 m - 7 d - 20 h - 0' - 0" | 2023-03-13 11:51:48



"Lvivvodokanal" has 17 underground water deposits. Groundwater reserves are estimated at 653,000 m³/day. This exceeds the needs of the city of Lviv by 3 times

Location of 17 water intakes of "Lvivvodokanal" in accordance with the distribution of underground aquifers and the borders of the Vistula and Dniester river basins within the Lviv region





- **Underground reservoirs for these aquifers are highly water productive lithology-formational geological complexes. According to age, from top to bottom, they are presented:**
- **1. The aquifer of the Upper Pleistocene and Holocene supraflood in the II-III terraces of the gravel-sand deposits of the Stryi River;**
- **2. Neogene aquifer in limestones, sandstones and sands;**
- **3. Cretaceous aquifer in marls, chalk and sandstones;**
- **4. Devonian aquifer in sandstones with layers of argillites and siltstones, limestones and dolomites.**

Advantages of installing water level indicators at Lvivvodokanal wells

- 1. The devices will be located in closed premises under security, which will protect against possible vandalism or theft of measuring equipment.
- 2. Power supply is connected to above-well structures.
- 3. Wells are equipped with production recording devices. Data from the metering devices have online communication through special software with operators monitoring the extracted water.
- 4. The possibility of comparing groundwater regimes, both in the conditions of disturbed and undisturbed regimes.
- 5. "Lvivvodokanal" conducts systematic testing of quality indicators of extractive waters, which will provide versatile factual data material at observation points.
- 6. Long-term analysis of the received data will allow to assess the state of underground water resources of Lviv region, the prospects of extraction, which will be the basis for the supply of underground water to other territories. «Lvivvodokanal» is one of the largest mining enterprises of Ukraine with the necessary production resources and service personnel.

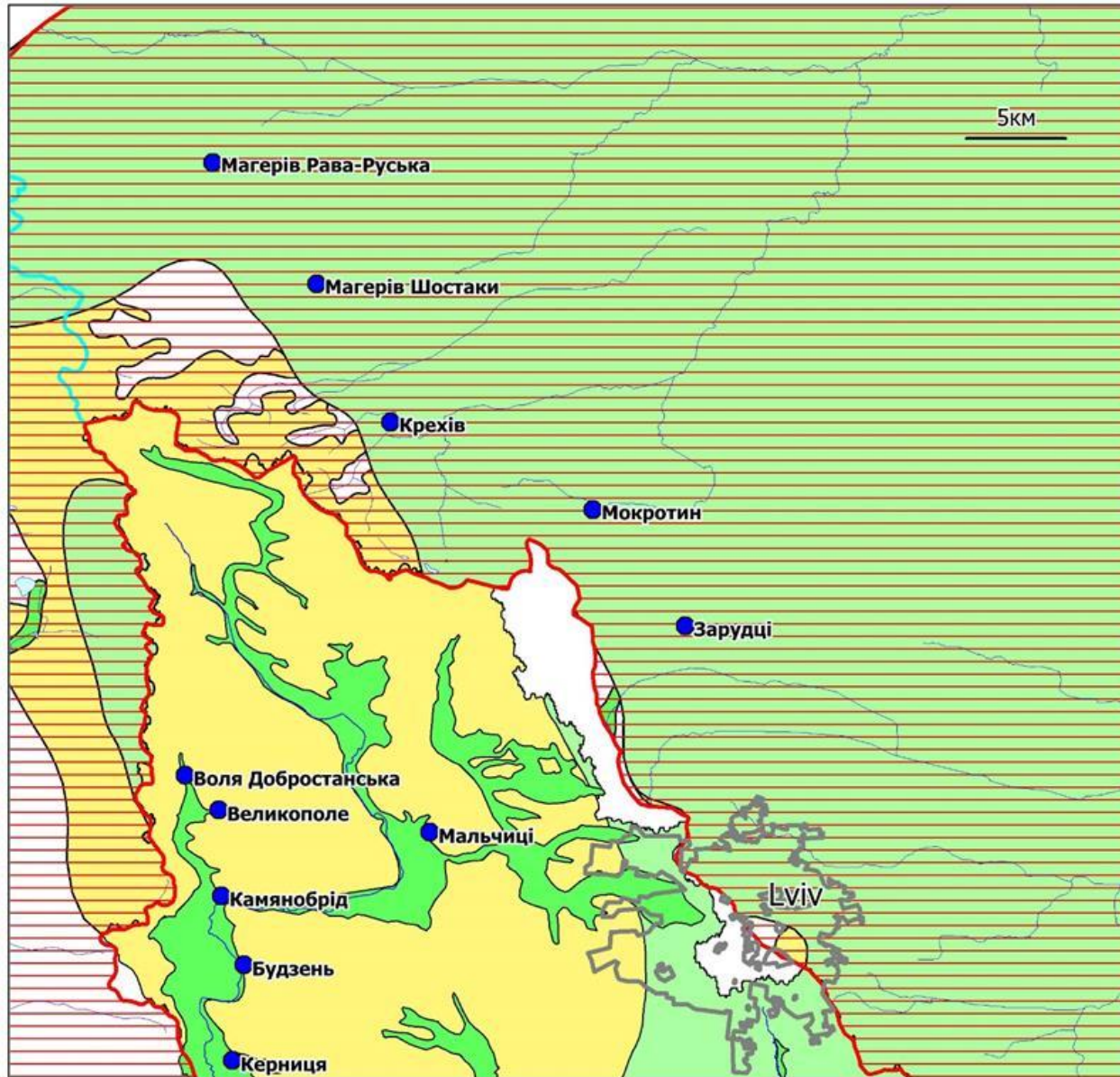


«Lvivvodokanal» borehole pavilions



Well automation

Water intakes of the «Lvivvodokanal» of the northern and western groups in the Vistula River basin



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Conclusions

- «Lvivvodokanal» is an experienced subsoil user, a supplier of drinking water to consumers, and is one of the largest enterprises in this field in Ukraine.
- The company's wells are located at a considerable distance from each other and cover a large area.
- The location of devices for online monitoring of water levels at the wells of «Lvivvodokanal» is expedient, both from the point of view of their protection, and from the point of view of the value of the data obtained.
- The data obtained in the future from water level monitoring devices and their evaluation are the basis for increasing the reserves of extractable water, which in the future can become a valuable export product.
- It will be impossible to carry out such an assessment of all the wells of «Lvivvodokanal», equipping them with leveling devices, without outside help. The Lviv Ecological Foundation can be involved in obtaining such funding.