

2022 Inspection Results

System O)) wastewater treatment technology plays a clear role for owners of isolated dwellings—protecting the environment.

The annual monitoring requirement of the Ministère de l'Environnement et de la Lutte contre les changements climatiques du Québec (MELCC) is intended to ensure that treatment technologies achieve the required purification performance, i.e. they continue to function well, year after year. For many years, DBO Expert has been voluntarily publishing the results of the annual inspections of septic installations in Quebec that use its technology in order to demonstrate its compliance, durability, and simplicity.

Why simplicity? Because nearly all the annual follow-ups conducted revealed no specific maintenance to be performed—no changing of parts, no modifying mechanical parts or filter media, and no replacement of any kind. An annual follow-up simply consists of measurements and a visual verification, meaning no surprise invoices for the owner.

PRESENTATION OF RESULTS

Let's take a look at the results obtained in 2022 during the annual inspection of nearly 15,000 System O)) septic systems in Quebec.

Once again this year, 99% of the installations are operating normally, i.e. the water level is acceptable in the Advanced Enviro))Septic pipes at the core of System O)) technology. An acceptable water level allows air to flow through the pipes, meaning the biomass can treat the water without

uncontrolled growth. Of the 1% with an elevated water level, the causes have been identified and corrected in half of the cases, as explained later.

This year, we went into detail on our System O)) solutions with low-pressure distribution system, introduced on the market in 2019. Four years later, we can say with confidence that all of the inspected systems are functioning normally..



MAIN CAUSES

The use, installation, and appropriate design of a septic system are essential to its sustainable operation. Over half of the abnormal situations listed during the inspections had problems related to water drainage through the polishing field under the treatment technology. In other words, the water was being treated but restricted by the soil's ability to evacuate it. Through its expertise, DBO Expert has established a list of the most common causes that explain this drainage problem of the polishing field.

CONSIDERATION FOR USE

The main reason for problems in treated water drainage is hydraulic overload. This overload can be caused by a leak in the plumbing, water overuse, or a parasitic water supply to the septic system. The area for a polishing field is determined according to the soil's permeability and the daily volume of treated water that it should receive. A water supply that exceeds the capacity of the polishing field over an extended period of time can potentially cause water to accumulate.

Plumbing leaks can be challenging, but they can be detected by requesting that users stop using water during inspections. A constant stream of water will then be inspected at the septic tank, pumping station, or distribution box.

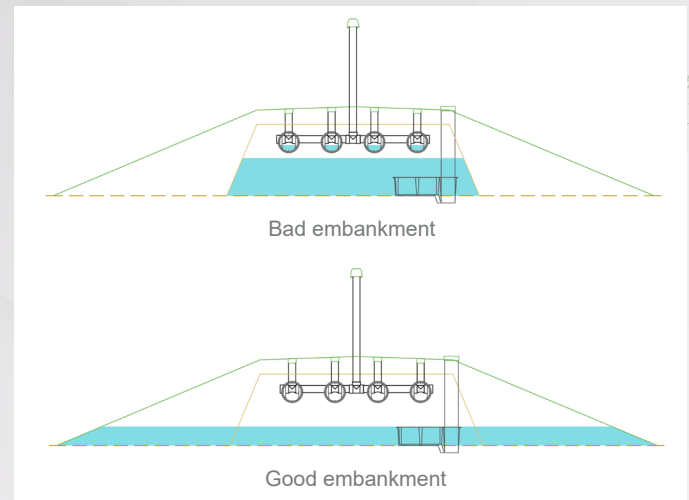
Water overuse is often determined by asking questions, for example, about the number of inhabitants, lifestyle habits, or devices that could generate large volumes of water that were not planned for during the septic system design.

Parasitic water sources are sometimes evident, but may be unavoidable and only temporary. In 2022, the MELCC reported the second most abundant snowmelt in the last 60 years, in addition to exceptional rainfall in May and June, the two most active months of the inspection season (<https://www.environnement.gouv.qc.ca/climat/Faits-saillants/index.htm>). Given this context, a temporary problem in water drainage could be considered quite normal.

INSTALLATION CONSIDERATIONS

We cannot emphasize enough the importance of using a quality backfill to cover a septic installation. Did you know that an inadequate backfill can significantly affect treated water drainage? Lateral flow plays a major role in dissipation. An impermeable backfill prevents infiltration under

the system, which can cause accumulation.



DESIGN CONSIDERATIONS

Does the polishing field have to be located at the bottom of a slope? Are the soil conditions suitable? Is there evidence that groundwater can be temporarily elevated? Do the surroundings seem swampy? Feel free to add elements, for example, requesting that drainage trenches be installed or to further raise the system.

These minor additions during installation can play a significant role in soil infiltration capacity and in ensuring the effectiveness of the polishing field.

CONCLUSION

Despite almost all inspected System O)) systems being in excellent condition in 2022, DBO Expert continues to raise awareness among its clients and partners on how their sustainability is a direct result of proper design, installation, and use. To this end, it continues to provide information, advice, and recommendations through social media, its blog, and newsletters as well as ensures adequate training for its installers and design partners.

Whether an owner or a partner, register for any of our means of communication, or ask your questions to our Customer Service team. Above all, our priority is being here for you.