

Häggensås

A Mellifiq reference project

Mellifiq's Innovative Drinking Water Plant in Östersund

**A complete EPC project for a
decentralized full-scale
drinking water plant**

MELLIFIQ

Häggenås, Östersund

In this reference project we are heading up north to the municipality of Östersund in Sweden, to design, build, and commission a complete drinking water facility. This facility will be specially adapted to meet drinking water standards, handle challenges posed by the climate and ensure a safe and reliable long-term water supply for the community.

Facts

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| Location: | Östersund, Sweden |
| Application | Drinking water |
| Industry: | Public utility |
| Project value (USD): | 1 000 000 |

Solution:

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| Mellifiq delivery: | WaterMaid nano filtration system, water softening utilizing nano membrane technology, Saniray Zeeron UV reactors, advanced automation and control systems, along with a complete facility setup including planning, designing, civil works and installation of all process equipment. |
| Capacity: | 17 m ³ /hr |
| Facility specifications: | The core of the facility includes a water treatment process hall equipped for purification and related operations. Additionally, the facility features a personnel pentry and restroom. An internal water system, which passes through a water heater, supplies water to the pentry, restroom, and an emergency shower, essential for handling chemicals within the facility. The roof is specifically engineered to handle heavy snow loads typical to the region and designed for possible future installation of solar panels. |

The problem

Östersund municipality identified the need for a decentralized drinking water plant in Häggenås to address insufficient capacity in their existing supply and enhance the drinking water quality and secure the local water supply in the area.

The project involved more than just constructing and designing a treatment process; it included comprehensive planning, design, extensive civil works, and installations of all process equipment.

Mellifiq's expertise in water treatment technology and capacity to provide tailored, innovative solutions was a perfect fit for the case.

The new drinking water plant needed to accommodate drinking water for the surrounding urban areas with a large buffer capacity. The facility had to be constructed in compliance with Livsmedelsverkets (The Swedish food agency's) regulations "LIVSFS 2017:2" for drinking water and associated materials to ensure safe use.



Birds-eye view of the facility location

The solution

The planning of the facility included process design, architectural planning, permit applications, and geotechnical investigations to ensure the ground's suitability for construction.

During the engineering phase, all aspects of the project were planned, including electrical systems, building construction, water and sewage systems, and equipment for the water purification process. The facility's appearance was designed to blend in with the area's character in mind to harmonize with the surrounding environment.

The project involved managing all practical aspects, including civil works to prepare the construction site, laying the foundation and erecting the building.

Existing boreholes were used for raw water, which were upgraded with new pumps and infrastructure to improve extraction and treatment efficiency. The treated water is then either stored in an underground reservoir or supplied directly to the water network.

Besides the water supply to the drinking water treatment plant, there is utility water with a water heater. This water supply provides toilets and kitchens with water and an emergency shower due to the handling of chemicals in the building.



On-site preparations



The advanced membrane filtration and UV systems were installed, internal installations of process equipment were completed site acceptance test (SAT) and commissioning

Evaluation

In this project we successfully delivered a complete and customized water supply facility, demonstrating our expertise as a leading EPC (Engineering, Procurement, and Construction) contractor. The project highlights our commitment to providing high-quality, secure drinking water solutions globally.

The facility integrates turn-key technologies, including membrane filtration and UV disinfection. The membrane system includes a CIP system with a water tank and a dosing system with scale inhibitors to rinse the membrane system if needed. The system is also equipped with advanced automation and control systems that enable real-time pressure monitoring and maintain stable operations. Strategically placed sampling points throughout the facility enable comprehensive quality assessments.

The success of this vital work underlines the significance of strong partnerships. By integrating sustainable practices and material choices we strive to minimize our environmental footprint and ensure that the water supply in Häggensås meets the community's needs for many generations to come.



Advanced technology for water purification which ensure the highest quality and safety

About Mellifiq

Mellifiq is a multi-awarded environmental service company group, that has since the early nineties evolved into a world leading system and solution provider with multiple groundbreaking applications for industrial, municipal, and real estate clients. We supply cutting-edge technologies to manage the most sophisticated air, water, and energy challenges.

Mellifiq offers a complete range of air and water treatment technologies and solutions across multiple industries such as processing industry, energy sector, food and beverage, pharmaceutical, wastewater treatment and commercial real estate.

Mellifiq offers strong and renowned brands, such as Ozonotech, Nodora and Water Maid, and world-class engineering services combined an excellent track record of more than 40 years of innovation. We help our clients achieve the most efficient and sustainable solutions while creating the maximum value for their businesses.

With several business units across Europe, Mellifiq is headquartered in Stockholm where research and development, production, QA and certification all take place. Our unique technology and our extensive expertise have made us the Center of Excellence for the world's most complex projects, and a global player with installations on all six continents.

Everyday millions of people rely on our solutions for ventilation, disinfection, sanitation, and odor control. We are committed to raising the bar for the concept of clean and the industry standard for engineering, technical services and general contracting.

For additional information, visit our website at www.mellifiq.com

