Tingvoll Municipality, Norway
Area: 321 km²
Inhabitants: approx. 2,970 (as of Q3, 2021)
Population density: 9 persons/km²
(Norwegian average: 15/km²)
Wastewater network length: 28 km
Pumping stations: 10

A pumping station service cabin in scenic surroundings at Stølan, Tingvoll Municipality.

Norwegian municipality gets an overview of pumping station status with new wastewater management solution

What started as a replacement job for a faulty pumping station ended as an end-to-end wastewater management solution that gives Tingvoll Municipality great control and monitoring options – and peace of mind.

"We're constantly looking for ways to make our operations a little more efficient, and the first step is to know what's happening in our network" says Egil Betten, technician at Tingvoll Municipality in Norway. "To deliver the service that our citizens and administration expect from us, we need to know the status of all our pumping stations."

The objective: high service levels, optimised resource use

Tingvoll Municipality is located on a beautiful peninsula in western Norway, surrounded on three sides by fjords. The well-developed but sparsely populated area includes a 28 km wastewater network with 10 automatic pumping stations managed by the municipal wastewater department. The objectives of the department are clear: delivering high-quality wastewater services while at the same time optimising the use of staff and equipment resources.

To achieve both of these objectives, Tingvoll Municipality decided to modernise its wastewater network – and the project kicked off with a pressing issue that needed to be addressed:

The old pumps in one automatic pumping station needed to be replaced. As Tingvoll Municipality were not satisfied with the manufacturer's service, they looked around for another partner and called Grundfos to get a quote for a replacement pumping station.

Reliable pumps with intelligent controls

Grundfos supplied a prefabricated pumping station equipped with Grundfos SEV wastewater pumps, CUE frequency converters, a CU 362 control panel, and a Dedicated Controls pump control solution. The SEV pumps were dry-installed on top of the pit with suction pipes going into the pit. The pumps are controlled using Grundfos Dedicated Controls, a wastewater pump control solution that provides intelligent real-time control based on constant flow and volume calculations and automatically adjusts pump performance to match current operational requirements.

GRUNDFOS

Possibility in every drop

A prefabricated pumping station with Grundfos equipment being installed.

The station was installed and commissioned by Grundfos and was soon running as planned. Based on the good performance, Tingvoll Municipality asked Grundfos to upgrade the control cabinets of all other automatic pumping stations to Dedicated Controls.

Grundfos worked with a local switchboard manufacturer who built backplates with the necessary equipment which were then mounted in the existing cabinets by a local electrician. Again, Grundfos handled commissioning and installation testing.

Great monitoring and service options

By now, the wastewater department at Tingvoll Municipality was convinced that Grundfos was able to deliver products, solutions, and service that fit their requirements. The municipality now completed its end-to-end wastewater management solution by adding a remote management system, Grundfos Connect, as well as a service agreement.
The digital solution allows pump operators to monitor and manage pump systems securely and reliably over an internet connection. The system offers an alternative to dedicated SCADA systems and is very user-friendly, presenting status information, alarm messages, and even live pump data on a computer or mobile device.

Solutions Grundfos delivered

- Dedicated Controls
- Wastewater pump controls
- CUE frequency drives
- CU 362 control units
- Remote monitoring
- Remote alert handling
- Remote control
- SEV wastewater pumps
- Prefabricated pumping stations
- Commissioning
- Testing
- Service agreement
- Consultancy and support

The service agreement with Grundfos means that Tingvoll Municipality is getting specialist pump service and maintenance for its mission-critical SEV pumps and connected systems. Not only does this ensure reliable pump operation because the pumps are being handled by specialists; it also frees up precious internal staff resources for other tasks.

The submersible Grundfos SEV wastewater pumps can be dry-installed without external motor cooling.

An end-to-end wastewater management solution

As of this writing, approximately 10 pumping stations have been equipped with Dedicated Controls and Grundfos Connect, the digital solution for remote monitoring and control, and more are on the way. The SEV pumps in the new pumping stations are performing without any issues; when the pumps installed in the old pumping stations approach end of life, they may be replaced with new Grundfos SEVs.

The biggest benefits for Tingvoll Municipality are the monitoring options provided by Grundfos Connect, and the fact that the municipality has acquired an end-to-end wastewater management solution that includes pumping stations, pumps, controls, commissioning, and service by dealing with only one supplier: Grundfos. “With the new system, we can see what’s happening at all pumping stations in real time, and that means we can plan our inspection and maintenance work much better,” says Egil Betten. “If a pump is doing fine, we don’t need to send someone in a service van to check up on it – we can see its status on our computers and smartphones. That saves us a lot of time. Also, it makes our life easier that we’re dealing with only one company for all of this. I don’t need to coordinate with several suppliers, because Grundfos does it all. That’s a load off my chest, and it means we save a lot of time that we can use for other things”.

Egil Betten is satisfied with the assistance provided by Grundfos staff which has helped his department reach its operational objectives.

“I think the sales and service guys from Grundfos have been quite good,” he concludes. “They listen to our concerns, and they have helped us throughout the process from our first contact to the service agreement. That’s the kind of commitment I’m looking for in an external supplier, and it has definitely helped us do our jobs for the citizens here in Tingvoll.”

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