

STORAVATNET

-A POTENTIAL SPARE WATER SUPPLY FOR HAUGALANDET



TYSVÆR
KOMMUNE

WHY AND HOW DID WE DO IT?

Problem:

During the past two years, there have been intense heat waves in Western Norway. As a result, last summer we almost ran out of water we had to take action to have enough to survive, as a result we could not even water out plants.

What we did:

We wanted to do something that was useful for us and our community, so we had a meeting with our municipalities and asked for tips. They tasked us with surveying four creeks feeding into lake Storavatnet.

Investigation:

Looking for possible sources of clean water, we decided to investigate Storavatnet by Sandbekken as a spare water source for Haugalandet. To evaluate Storavatnet, we had to research which environmental factors affect water quality.



RESULTS

Issues with Storavatnet:

Pollution has caused the water in Storavatnet to become dirtier and has raised the colour index of the water.

Because the water is fairly opaque, cleaning the water with UV light is not viable, as the UV light cannot penetrate through the water to clean it.

Solution:

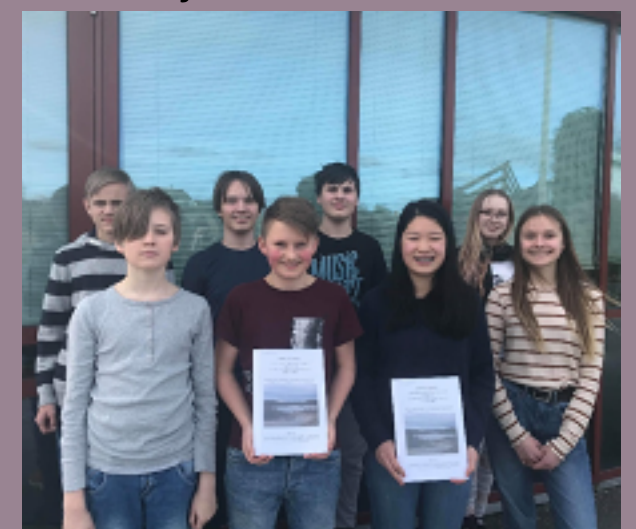
Because UV cleaning will not work, a filtration system such as reverse osmosis or slow sand filtering will be required.

Parameter	Unit	Min.	Average	Max
Colour units	mgPt/l	29	52,87	78

Parameter	Unit	Limit	Min.	Average	Max
E. Coli	Number/100 ml	0	0	13,125	38
coliform bacteria	Number/100 ml	0	45	121,25	>201
Intestinal enterococci	Number/100 ml	0	0	1,375	5
Colony count 22°C	Number/100 ml	100 and no abnormal change	190	>300	>300

WHAT DID WE LEARN?

When working on our project we learned about how the water we drink is cleaned, and how our municipalities clean it. We also learned about colour index number, and different methods of cleaning water, the factors of clean water, and the regulations in Norway on water standards.



Back from the left: Adrian Låte Svendsbøe, Lasse Stuvik, Hans Christian Andersen and Ann Rebekka Undheim. Front from the left: Torjus Olai Aartun, Andreas Aukland, Maria Rønnevik and Evelina Nesse. Jonas Harboe was not present for the photograph.

CONCLUSION

Conclusion:

The best way to turn the Storavatnet water into viable drinking water would be to add a filtration system, such as reverse osmosis filtering or slow sand filtering. By doing this, the water can be made safe to drink and alleviate the water scarcity issues in Western Norway, providing the people with clean water for years to come.