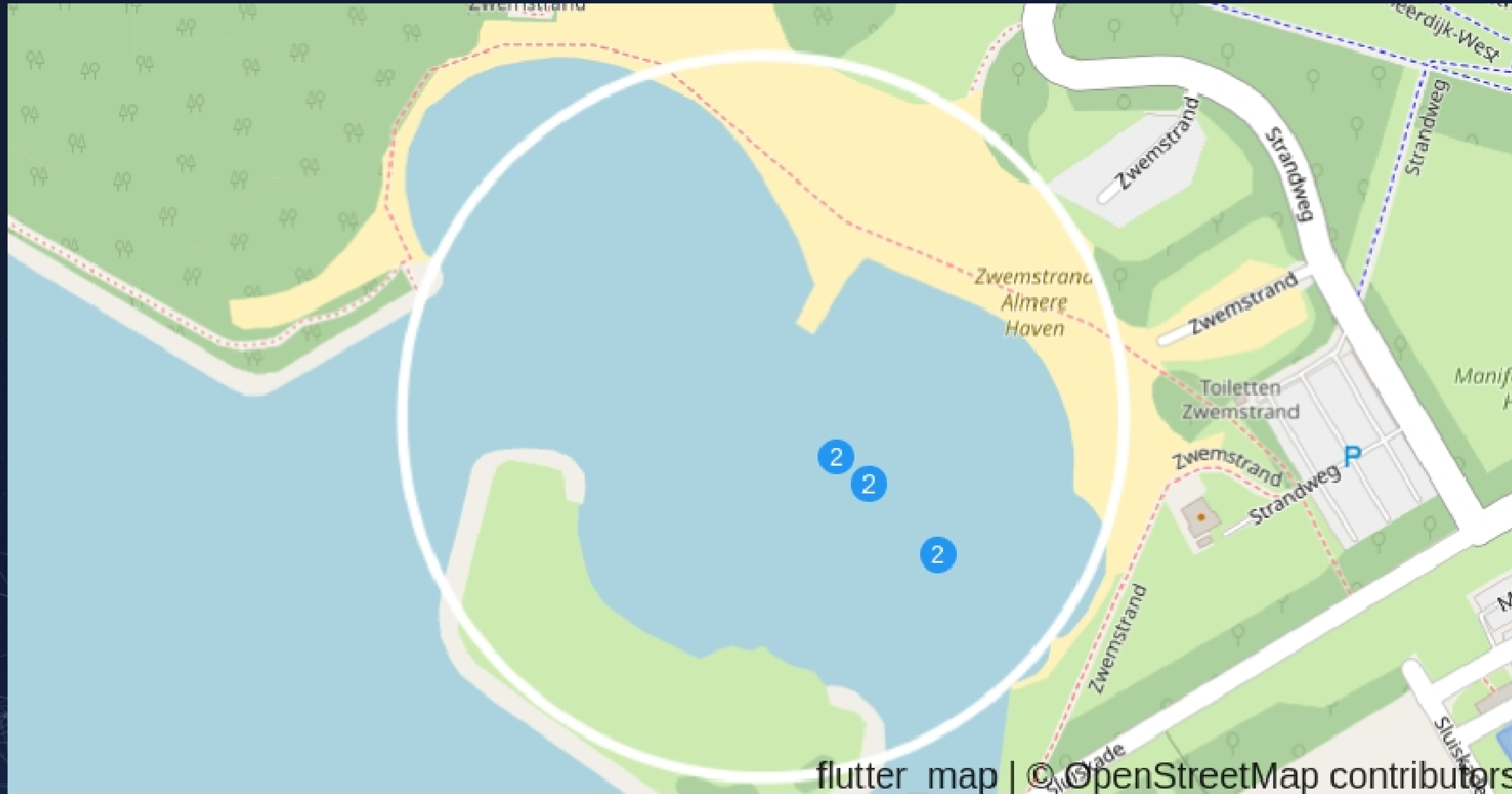


Monitoring swimming water quality at “zwemstrandje Almere haven”



story
line

- take home message
- contextual analysis
- results
- dashboard
- conclusion

take
home
message

Swimming water quality can be monitored in real time

- We successfully monitored blue-green algae bloom in real time at “zwemstrandje Almere haven” using an aqa.earth algae spotter.
- The sensor data suggest advising against swimming for two weeks in August and for two short periods of a few days in September.
- The results are in agreement with laboratory analyses from water samples taken by local authorities.
- We only need one sensor with integrated transmission and fluorescence functionality for signal correction.
- Real-time water quality sensing helps in timely sample collection, boosting safety and swim time.

story
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What we learned

- To prevent vandalism, we applied sensors on a pole running on ecologically friendly batteries that last one season.
- We successfully integrated all water quality measurements that we need into one sensor, the aqa.earth algae spotter.



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results

Local situation



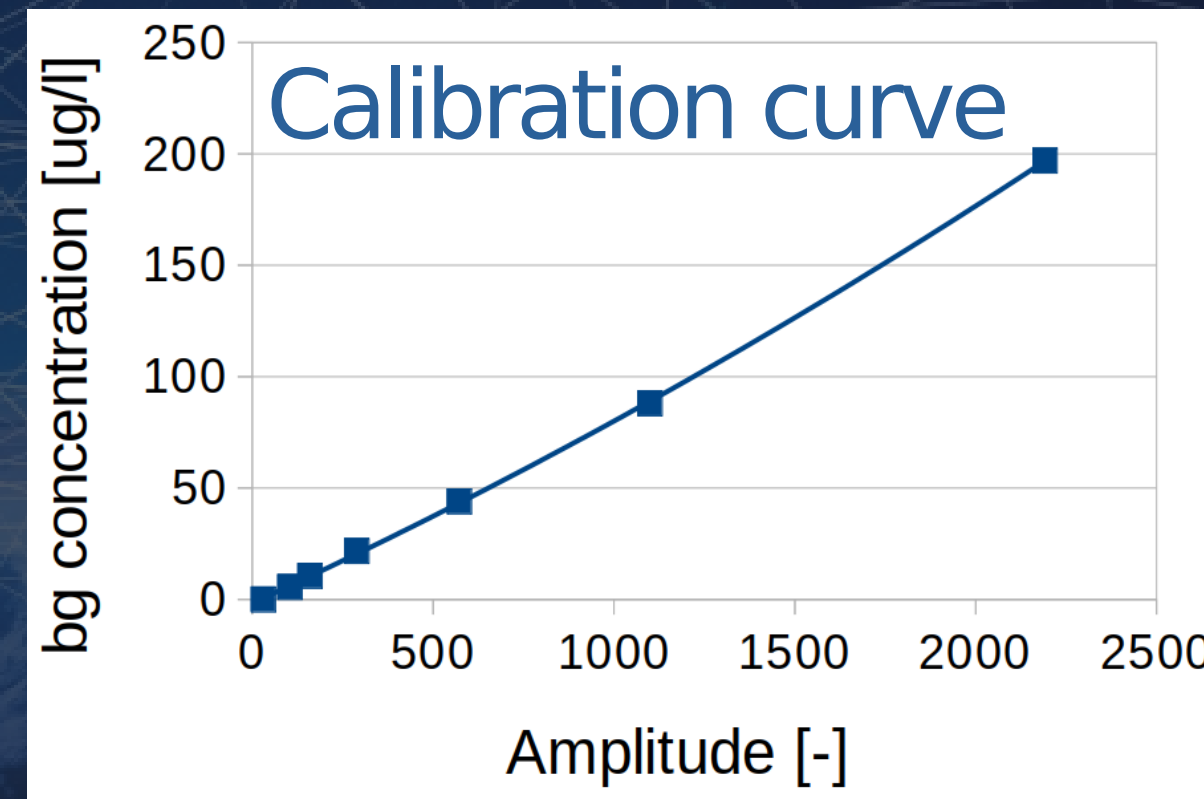
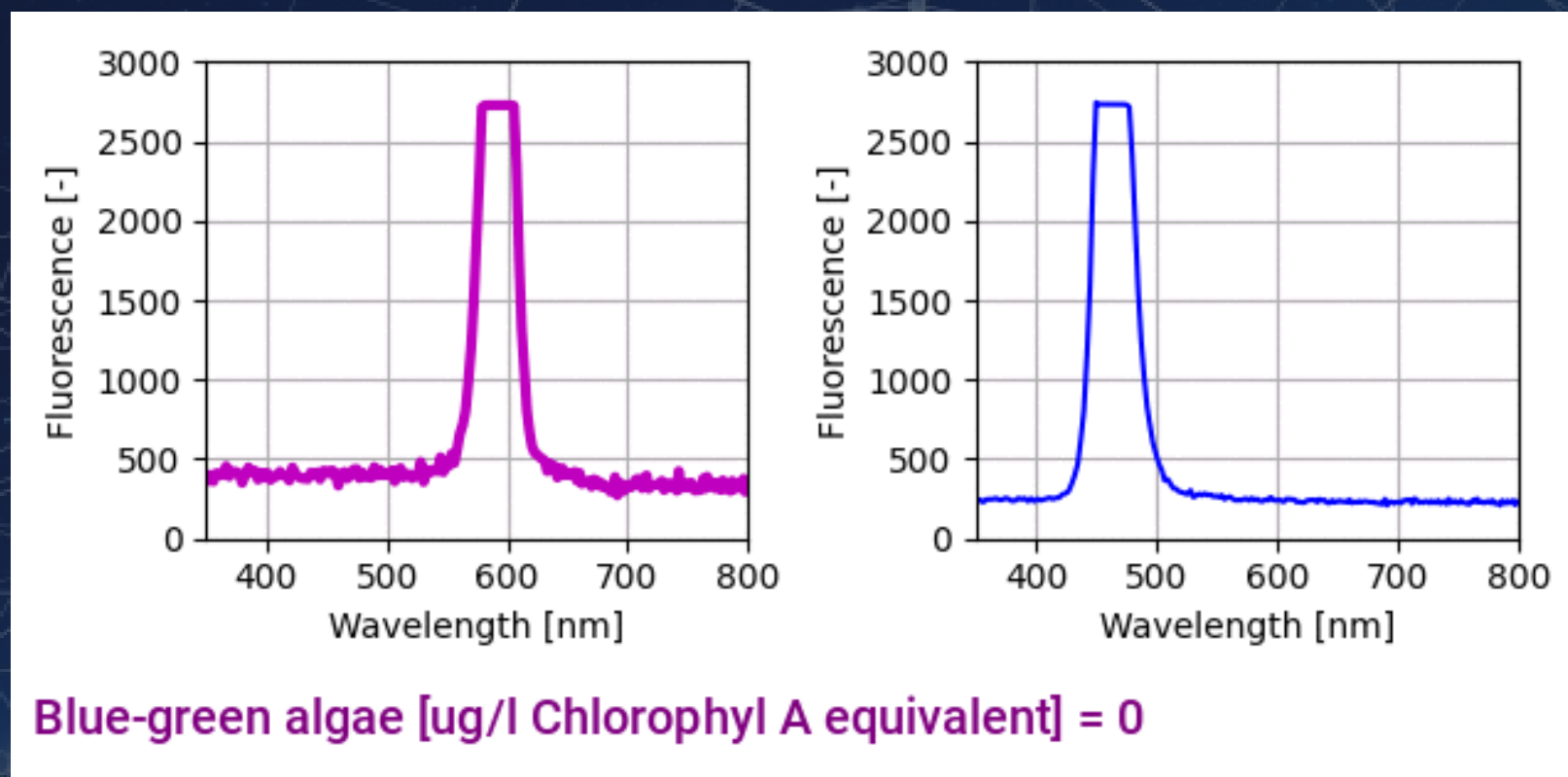
Cooperation with restaurant "De Jutter", receiving station, sensor on pole.

results

Blue-green algae sensor performing well



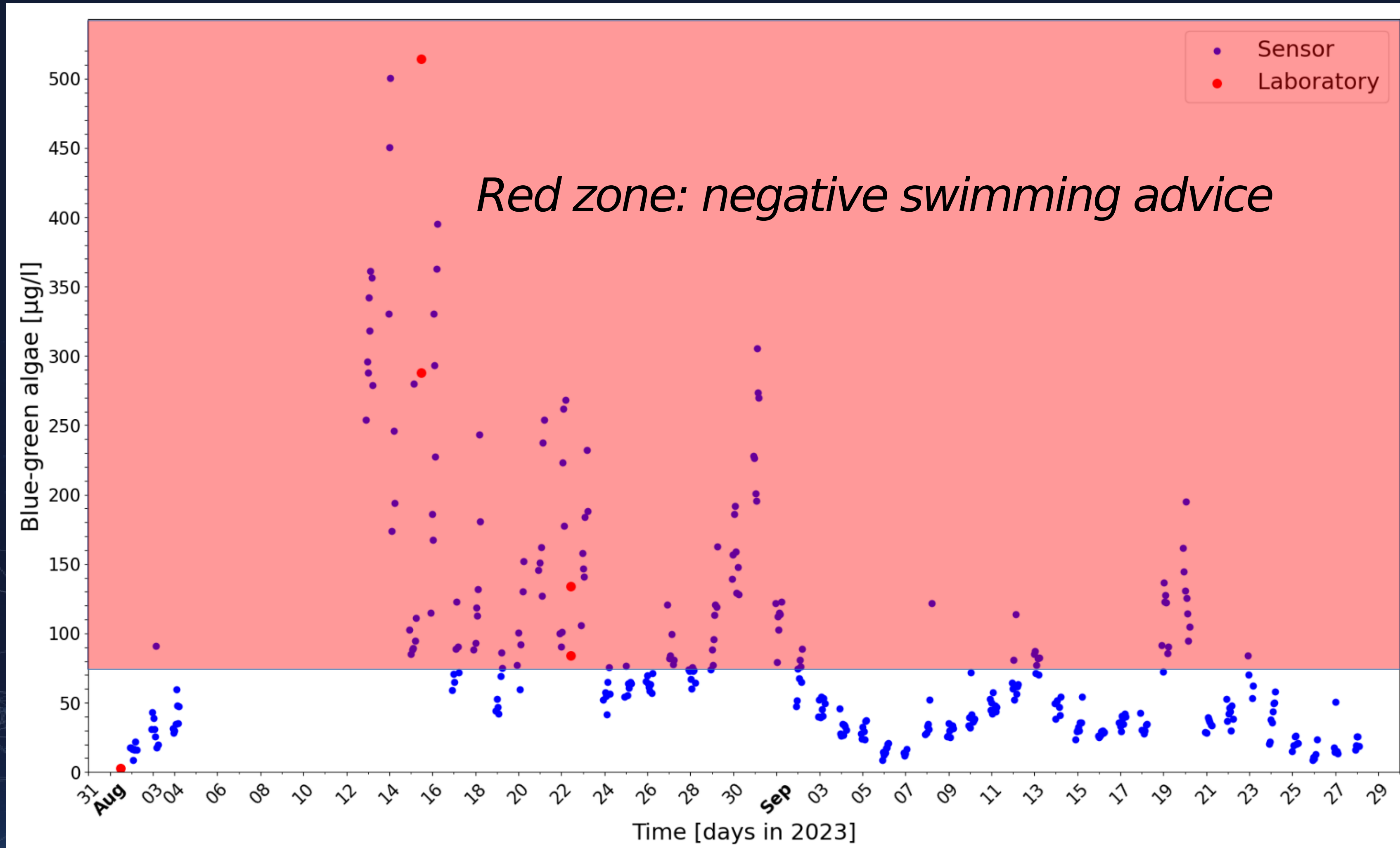
* The turbidity and fouling correction is work in progress.



Sensor successfully calibrated at Aquon on 25-09-2023.

results

Real-time suggested swimming advice at Almere haven



story
line

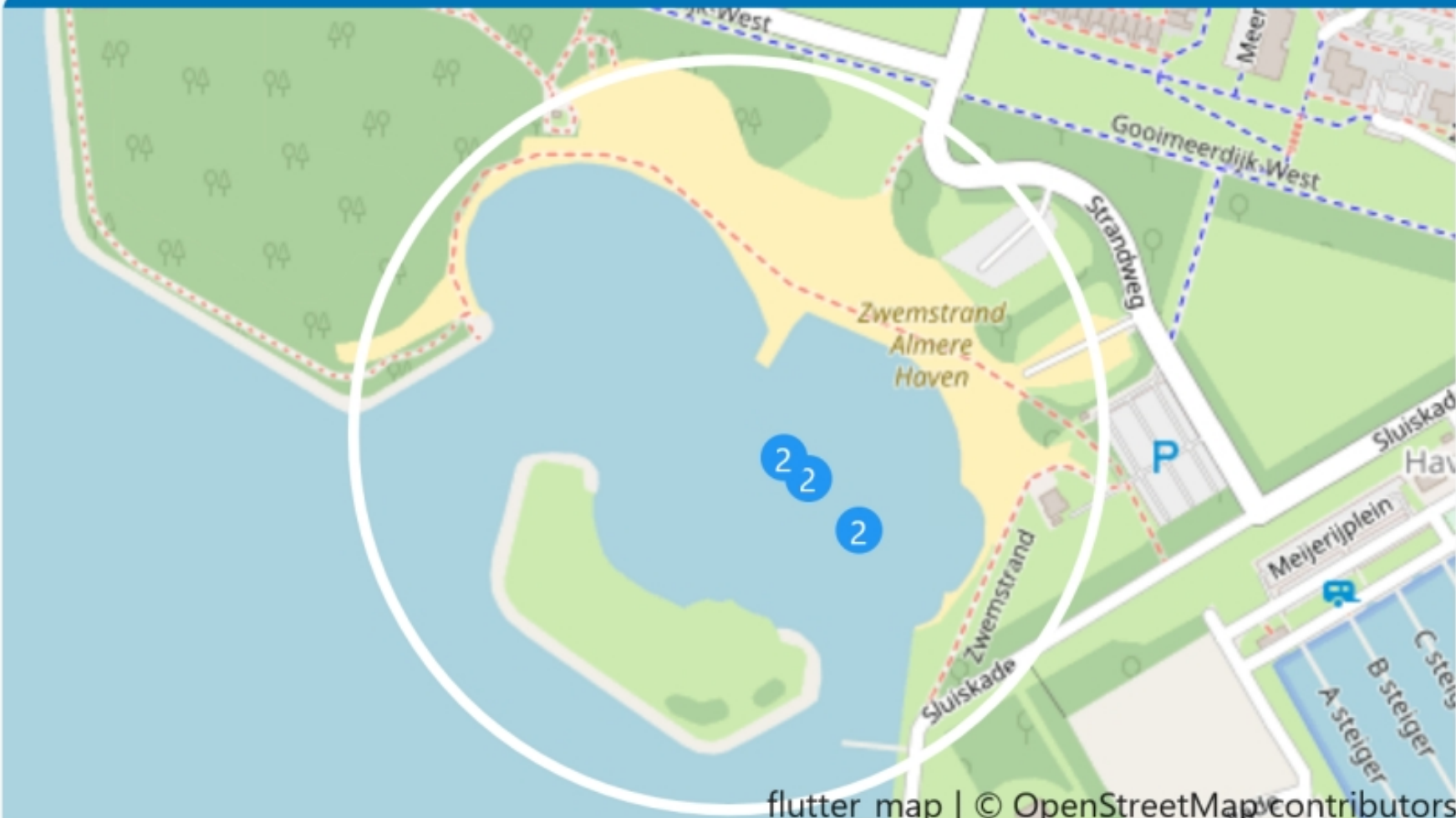
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Swimming water quality dashboard


AQA

Almere Haven






quality | sensors | data | prediction | latest sensor update: 11:34:46

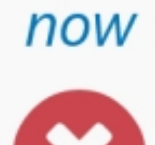


flutter_map | © OpenStreetMap contributors




13 September 2023
overall quality 

quality elements






- blue-green algae 
- green algae 
- water temperature 
- conductivity of water 
- visibility 






now 

legend

-  water quality, physical parameters
-  water quality, algae spotter
-  air quality sensor, physical parameters

EU Water Framework Directive color coding

-  high
-  good
-  moderate
-  poor
-  bad

water  **beach**  **nature**  **farm**  **urban** 

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Real time monitoring of blue-green algae in swimming water quality is feasible

- We successfully demonstrated an innovative approach to monitor swimming water quality in real time using our in-house developed multi parameter spectrophotometric sensor.
- Real-time water quality sensing helps in timely sample collection, boosting safety while allowing maximum swim time.
- We only need one sensor with integrated transmission and fluorescence LEDs for signal correction.
- The aqa.earth algae sensor goes in production in January 2023 so that we can roll-out our technology concept in 2024

Let's shine
a light on water

