



CAR WASH

Car-Wash Reused Water Case Study Denmark

At a car wash in Denmark, an improved water cleaning process led to greater water clarity throughout the cycle, improving water reuse. Filtration-based testing confirmed lower particle content.

Client details have been anonymised at their request.



Water Clarity Improved



Lower Particle Content



Improved Water Reuse



Treatment Chemicals Used



BEFORE & AFTER

BEFORE

- Cleaned wash water was still distinctly cloudy
- Visible cloudiness caused by suspended particles
- Water reuse limited by incomplete cleaning process

AFTER

- ✓ Recycled wash water remained visibly clearer
- ✓ Clear water quality maintained throughout trial
- ✓ Fewer particles present in reuse water



BEFORE

Dirty (L) and reuse (R) water at week 0



AFTER

Dirty (L) and reuse (R) water at week 8

OVERVIEW

A car wash in Denmark operates with biological water treatment. Dirty wash water passes from the underground pit, then through a sand trap and biological tanks to clarify the water for reuse in the wash cycle. Water samples taken before and after the treatment cycle both showed turbidity caused by suspended material, indicating that the treatment cycle was not fully cleaning the water.

CHALLENGE

The aim was to improve the cleaning process in order to allow for greater water reuse.

- Wash-pit water was turbid and cloudy with a grey colour.
- Even after treatment, water had a distinct yellow tint and visible cloudiness.
- The tint was caused by suspended particles.

SOLUTION

HydroFLOW® units were clamped to hoses carrying dirty wash water from the pit. The biological system used no chemical dosing, and pit and cleaned water quality was monitored over eight weeks.

UNIT INSTALLED

2x HydroFLOW® i45

INSTALLATION POINT

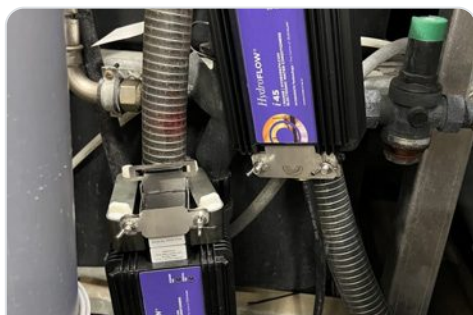
Dirty wash-water hoses, after pit and before the sand trap/sludge pit

TREATMENT PROCESS

Biological treatment with clarified water reuse

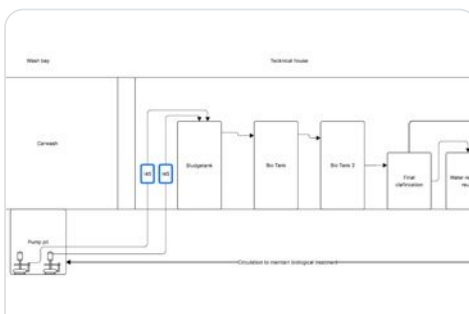
EVALUATION PERIOD

8 weeks



INSTALLATION

Two units on wash-water hoses



DIAGRAM

Installation location

RESULTS

Clear Reuse Water

The cleaned water for reuse was markedly clearer after just one week.

Clearer Pit Water

Dirty pit water clarity improved as cleaner reuse water returned to the system.

Improvement Held for 8 Weeks

Clear recycled-water quality was maintained at the week-eight inspection.

Lower Particle Content Confirmed

Volume-to-block of 0.45 µm filter capacity increased from 20 ml to 70 ml.



0.45 µm field filter test



Reuse water was passed through a 0.45 µm filter. A greater volume passing through before the filter became blocked indicated lower particle content.

KEY TAKEAWAY

Summary

Two *HydroFLOW*® i45 units treated dirty wash water entering a biological recycling system at a car wash in Denmark. Recycled water became visibly clearer after one week and remained clearer through Week 8. In the field filter test, throughput increased from 20 ml at baseline to 70 ml at Week 8, indicating substantially fewer fine particles.



WATER CLARITY IMPROVED



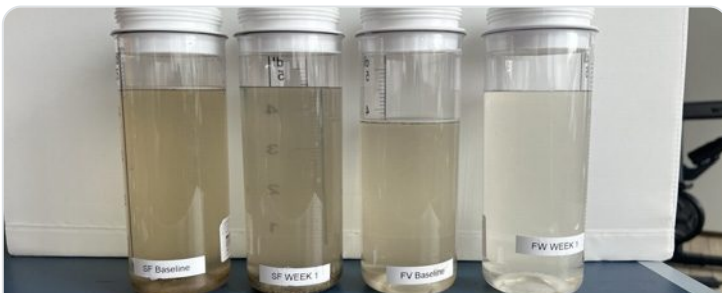
LOWER PARTICLE CONTENT



IMPROVED WATER REUSE



ADDITIONAL PHOTO EVIDENCE



RESULTS

Clarity improved in 1 week before (SF) and after (FW) cycle



ANALYSIS

Filter throughput increase indicates lower particle content

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