



● COOLING TOWER

Hospital Cooling Tower Case Study Las Vegas, USA

HydroFLOW® treatment enabled chemical-free cooling tower operation, reducing scale and biological count while improving chiller efficiency and water use.



Reduced Water Use

<1000

Biological Count (CFU/ml)

5 mo

Chemical-Free Operation



Improved chiller efficiency

⇒ BEFORE & AFTER

● BEFORE

- ✗ Hard scale present despite chemical treatment
- ✗ Biocide and antiscalant required
- ✗ Elevated biological count

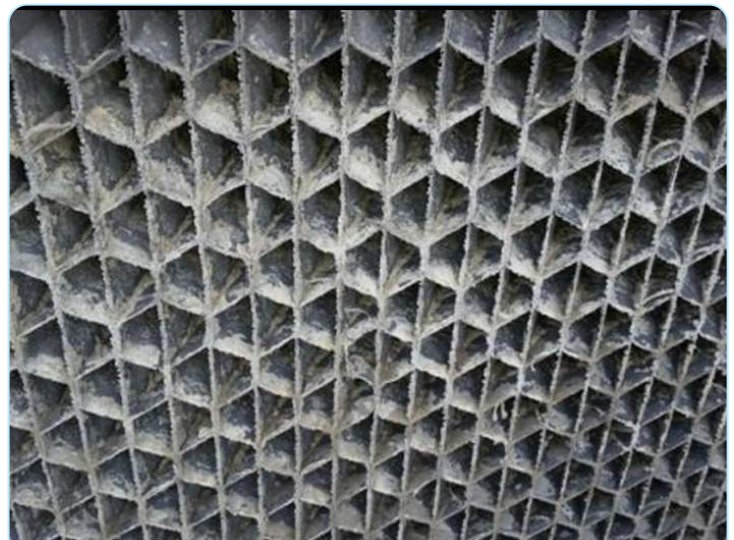
● AFTER

- ✓ Scale released and collected in sump
- ✓ Chemical dosing stopped after installation
- ✓ Biological count reduced below 1000 CFU/ml



BEFORE

Heavy scale on drift eliminators



AFTER

Drift eliminators after HydroFLOW®

OVERVIEW

Sunrise Children's Hospital operates a cooling tower system where persistent scale and biological activity continued despite chemical treatment. The ongoing buildup affected system cleanliness and performance, requiring continuous chemical dosing and regular monitoring to maintain operation.

CHALLENGE

Scale and biological activity persisted despite ongoing chemical dosing, leading to reduced system efficiency and increased maintenance requirements.

- Hard scale buildup on system surfaces
- Continuous chemical dosing required
- Elevated biological counts in system
- Reduced system efficiency and performance

SOLUTION

A *HydroFLOW*® unit was installed on the cooling tower recirculation pipe.

UNIT INSTALLED

1x *HydroFLOW*® unit

INSTALLATION POINT

Recirculating pipe

TRIAL DURATION

8 months

SYSTEM

Cooling tower system



INSTALLATION

HydroFLOW® unit installed on recirculation pipe



SITE

Cooling tower before *HydroFLOW*® installation

RESULTS

Scale released into system sump

Scale deposits loosened from surfaces and collected in the sump during operation.

Biological count reduced

Biological count reduced to below 1,000 CFU/ml during chemical-free operation.

Chemical dosing stopped

Chemical dosing was discontinued after installation and remained off during operation.

No new scale observed

No new hard scale formation was observed over the 5-month operating period.

Improved chiller efficiency

Chiller efficiency improved as scale and biological buildup were reduced.

Water use reduced

Higher cycles of concentration - reducing blowdown and overall water usage.

TESTIMONIAL

"After five months chemical-free, no hard scale was observed and biological count remained below 1,000 CFU/ml."

— Sunrise Children's Hospital

KEY TAKEAWAY Summary

HydroFLOW® treatment enabled chemical-free cooling tower operation, reducing scale and biological count while improving efficiency and reducing water use.



REDUCED WATER USE

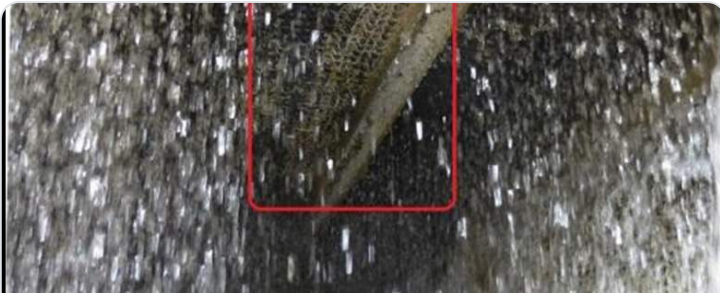
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BIOLOGICAL COUNT (CFU/ML)

5 mo

CHEMICAL-FREE

ADDITIONAL PHOTO EVIDENCE



BEFORE

Blocked fills restricting water flow before HydroFLOW®



AFTER

Unblocked fills restoring even water flow with HydroFLOW®



RESULTS

Scale settling in sump as fine silt



RESULTS

Soft scale easily wiped from surfaces

HYDROPATH

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