

DATA CENTER

High Cycle Cooling Tower Success Story



- **Decrease risk** with less hazardous chemical handling
- **Boost efficiencies** with higher performing water quality that eliminates downtime
- **Grow profits** by evaluating CapEx that saves on OpEx
- **Protect your investment** with real-time monitoring and remote system adjustment
- **Upgrade performance** with the continuous improvement model of the Earthwise Standard of Care



PROJECT CONSULTING

Our Certified Water Technologists survey and identify water opportunities throughout the facility, with the goal of reducing the water footprint, minimizing risk and cutting operating expense.

Earthwise considers ways to improve efficiency, extend equipment life, reduce chemical consumption and provide remote system performance monitoring.

Earthwise Proven Process

The process starts with a complete mechanical and system survey of the facility.

Our partners in industrial hygiene, safety and environmental services offer an additional dimension of expertise.

Initial Plant Survey

- Define piping networks.
- Consult OEM guidelines

Standard of Care

- Over 100-point service inspection.
- Managed by a VP of Compliance & Waterborne Pathogen Control.

Independent Lab Work

- Obtain and analyze data.
- Generate a plant formulary and determine what type of system to implement.

Sampling and Testing

- Conducting biological and deposit analysis.
- Photo Documentation.

Customized Solutions

- Follow ISO manufacturing and services guidelines.
- Full technical services with 24/7 remote monitoring and emergency response.

CASE STUDY

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PROJECT BACKGROUND

- A large data center in Illinois
- Consuming 25 million gallons of water per year
- Spending over \$500,000 per year in operating cost for the cooling system

EARTHWISE APPLIED SOLUTIONS

Humidification Pretreatment Program

Designed reverse osmosis (RO) system. Increasing heat transfer efficiencies.

Condenser Water System

Implemented custom pre-treatment program using ion-exchange technology. Installed a 24-hour remote monitoring system to ensure real-time reaction to system performance changes.

Results

- Increased cooling tower efficiency by 5 million gallons of water per year
- Reduced maintenance labor hours
- Reduced hazardous chemical consumption by 50%
- Reduced employee risk associated with chemical handling
- Provided immediate reduction in operation costs from day one



	Realized OpEx Savings
Reduction in Water Usage	5M gallons
Reduction in Treatment Chemicals	\$ 25,000.00
Reduction in Maintenance Time	\$ 6,000.00
Annual Water Savings	\$ 91,000.00
Capital Expense Payback	1.3 Years

CASE STUDY