

First**CLEAR**TM

Better Water, Better Paper



**HOLISTIC
APPROACH**
for Raw Water
Management 

FirstCLEAR™

A Reliable Raw Water Solution to Optimize your Operations

Raw water is a necessary part of papermaking – but it's difficult to control.

Various water sources and quality of incoming water can result in exponential contaminant activity, impacting the papermaking process.



From limited treatment to monitored and customized options, there are a **variety of approaches to raw water treatment**. **As a customizable solution**, FirstCLEAR can be incorporated as an essential part of the papermaking process regardless of your current solutions and conditions.

90%
of process issues
are related
to **RAW
WATER**

Learn how FirstCLEAR delivers more reliable water when it **first enters the mill**

Solution: FirstCLEAR

FirstCLEAR, Nalco Water's **comprehensive** raw water solution, is designed to control costs, improve operational efficiency and minimize product defects with more reliable raw water.

How FirstCLEAR benefits you:

With FirstCLEAR, you'll optimize your total cost of operations with more reliable water when it first enters the mill.

Choose FirstCLEAR to:

- **Maximize production efficiencies** and minimize downtime
- **Minimize product defects**

In addition, all of our systems are designed with operational safety in mind, **supporting a safer work** environment for your staff.

OPTIMIZE Total Cost of Operations:



PRODUCT QUALITY



PRODUCTIVITY



SAFETY



WATER

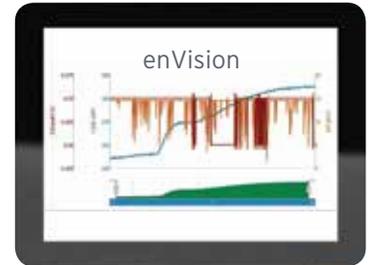
FirstCLEAR Raw Water Management

Proactive Monitoring and Data Management

- **MAP** (Metagenomic Analysis Protocol) is a patented technology that targets DNA from organisms and measures key indicators that are known to cause slime and deposit issues.
- **enVision** platform is a unique communication vehicle for trends and alarms of key performance indicators including ORP, pH and total chlorine, providing feedback for optimal control.



Online monitoring of KPIs:



Total Chlorine • ORP • pH

Equipment

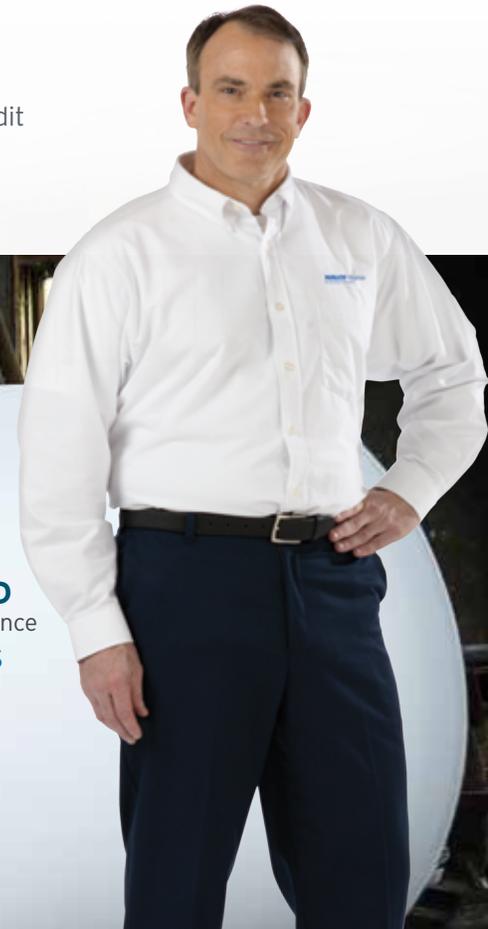
- Our equipment consists of chemical feed systems including **PARETO™ Mixing Technology**. PARETO achieves a more uniform distribution of chemical additives, resulting in increased process stability, reduced fresh water and energy consumption and optimal chemical usage. We design equipment with robust safety reviews.

Chemistry

- We offer a comprehensive chemistry program that **includes coagulants, flocculants and biocides** to help customize the program to meet your needs.

Service and Analytics

- Take advantage of our expertise and **personal, on-site** service for audit and application support.



Case Study:

PLANT OPTIMIZATION leads to reliable performance

Situation:

Mill was driven to eliminate use of chlorine gas and reduce variability of oxidant residual without changing microbiological activity on the machine or interrupting runnability.

Solution:

Mill implemented FirstCLEAR raw water management program.

Results:

▼ **REDUCED**
overall biocontrol costs **up to 20%**

▲ **INCREASED**
residual compliance **by 33 points**

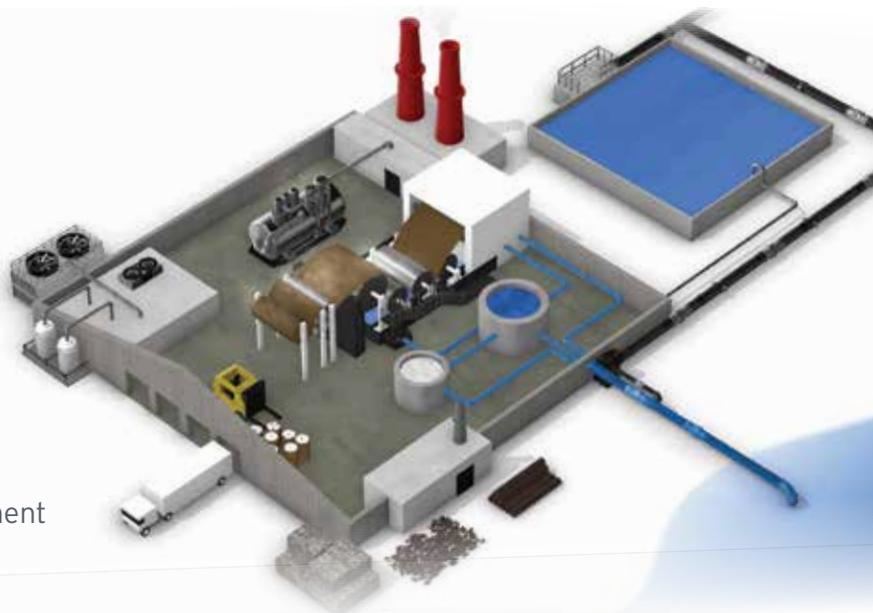
REDUCED
boil-outs and saved **800,000 gal/year**

HOLISTIC WATER MANAGEMENT

from Nalco Water:

Our proprietary solutions and personal service provides a comprehensive, holistic approach by following the flow of water through your plant to manage water quality and quantity throughout the paper-making process.

- Raw Water Treatment
- Process Water
- Cooling Water
- Boiler Water
- Effluent Treatment



With Nalco Water, you get expert service and peace of mind that the right water program will be **customized to fit your operation's unique needs.**

Our solutions are designed to increase your operational efficiency, improve sustainability and maintain water safety. You can rest assured that we will deliver the highest quality water program to benefit your bottom line.



Increase Operational Efficiency



Increase Water Sustainability



Maintain Product Quality



Ensure Safe Operations

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