CASE STUDY - North America
A PAPER TISSUE PLANT IN SOUTHEAST UNITED STATES LOWERS ITS PRODUCTION COSTS AND PROTECTS CRITICAL EQUIPMENT ASSETS

SITUATION
The raw water clarification was negatively impacting the entire plant operation. Fluctuations in the influent raw water quality were causing chemical dosing problems in the raw water operation. Carry-over of solids to the boiler system were reducing the boiler efficiency and increasing boiler operational costs. The use of alum and its inconsistent feed in the raw water was causing corrosion problems throughout the mill in excess of 10 mils per year in piping, heat exchangers, and critical production equipment.

NALCO WATER SOLUTION
NALCO Water’s Paper and Wastewater team conducted a detailed audit of the entire system and identified that the top priority was to optimize the raw water treatment performance. To improve the chemical mixing and dosing control, the team deployed a strategy that used PARETO™ mixing technology along with an automated dosage control device. In addition, a proprietary chemical, NALCO Water ULTRION™, was used in place of the existing commodity alum. The ULTRION is less corrosive to the mill’s equipment while improving treatment performance with the chemical control. The combination of these solutions has had multiple positive impacts on the entire plant’s operation.

eROI™ QUANTIFYING AND MONETIZING OUR VALUE

- The replacement of alum with ULTRION program and the improved chemical mixing and control system have resulted in an annual chemical saving of US$425,000.
- The boiler efficiency has improved due to less silica and solids loading, resulting in annual chemical savings of US$75,000.
- The change to the ULTRION program has resulted in a lower corrosion rate (from 10 to 3 mils per year), generating an annual maintenance saving of US$200,000.
- The ULTRION program does not require the pH adjustment (like alum), chemical handling is reduced, CERCLA requirements are improved.

Annual Customer Savings: $700,000

eROI is our exponential value: the combined outcomes of improved performance, operational efficiency and sustainable impact delivered through our services and programs.