



STRUVITE

# Augusta Struvite Control Case Study Augusta, Georgia, USA

A six-month trial, independently verified by Jacobs, eliminated anti-scalant dosing, softened existing struvite deposits and saved approximately \$4,000 per month.

|                                                        |                                             |                                                     |                                             |
|--------------------------------------------------------|---------------------------------------------|-----------------------------------------------------|---------------------------------------------|
| <div>\$4,000</div> <div>Monthly Chemical Savings</div> | <div>0</div> <div>Anti-scalant Dosing</div> | <div>&lt;8 mo</div> <div>Return on Investment</div> | <div>6 months</div> <div>Trial Period</div> |
|--------------------------------------------------------|---------------------------------------------|-----------------------------------------------------|---------------------------------------------|

BEFORE & AFTER

BEFORE

- Hard scale required chisels and hammers
- Anti-scalant cost about \$4,000 monthly
- Heavy struvite covered both belt presses

AFTER

- ✓ Anti-scalant dosing was reduced to zero
- ✓ Existing struvite softened and reduced
- ✓ High-pressure water removed softened deposits



BEFORE

Heavy struvite covered both belt presses



AFTER

Reduced scale after the six-month trial



## OVERVIEW

The J. P. Messerly Water Pollution Control Plant in Augusta experienced persistent struvite scale buildup on two belt filter presses, requiring anti-scalant dosing costing approximately \$4,000 per month and labour-intensive removal with chisels and hammers. A six-month trial, independently verified by Jacobs, evaluated Hydropath technology for struvite control.



## CHALLENGE

Hard struvite scale affected both belt filter presses, driving chemical costs and labour-intensive maintenance.

- Heavy struvite encrustation accumulated on the belt press drum and surrounding surfaces.
- Both belt filter presses were affected by persistent scale buildup.
- Operators used chisels and hammers to break loose the hard deposits.
- Anti-scalant dosing cost the plant approximately \$4,000 each month.



## SOLUTION

One *HydroFLOW*® i160 was installed on the six-inch sludge feed line. A single unit treated two belt presses, while anti-scalant dosing was reduced to zero.

### UNIT INSTALLED

1x *HydroFLOW*® i160

### INSTALLATION POINT

6-inch sludge feed line, under 100 ft upstream of one belt press

### SIGNAL COVERAGE

A single unit treated two belt presses

### TRIAL PERIOD

6 Months



### SYSTEM

*Sludge feed line installation*



### INSTALLATION

*Unit on sludge feed line*



## RESULTS

### ⌚ Anti-scalant Eliminated

Operators reduced anti-scalant dosing to zero throughout the trial period.

### \$ \$4,000 Monthly Savings

Eliminating anti-scalant dosing saved approximately \$4,000 per month.

### ⌚ ROI Under Eight Months

Chemical savings alone produced a calculated ROI in under eight months.

### 🔧 Existing Scale Softened

Final observations indicated that existing struvite deposits had softened and reduced.

### 🧰 Scale Easier to Remove

Softened deposits were removed with high-pressure water instead of chisels and hammers.

### ✅ Signal Reached Both Belt Presses

Oscilloscope testing confirmed that the Hydropath signal reached both presses.

#### KEY TAKEAWAY

## Struvite Control at Augusta

A six-month trial, independently verified by Jacobs, showed that Hydropath treatment eliminated anti-scalant dosing while softening existing struvite deposits, making them easier to remove. The plant saved approximately \$4,000 per month and achieved a calculated return on investment in under eight months through chemical savings alone.

**\$4,000/mo**

CHEMICAL SAVINGS

**<8 months**

RETURN ON INVESTMENT

**0**

ANTI-SCALANT DOSING



### ADDITIONAL PHOTO EVIDENCE



**BEFORE**

Heavy struvite across the belt press drum surface



**BEFORE**

Struvite deposits on other areas of the belt press



**BEFORE**

Existing deposit near the drum opening



**AFTER**

Reduced struvite scale after the six-month trial

# HYDROPATH

The Forefront of Sustainable Water Treatment

**HYDROPATH**

## Ready to control struvite scale?

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