Nine violations recorded at city sewage plant in '90
City nears end to state sewer ban
Under Resourced

Under Funded

Under Valued
1986
Facility Planning
1986
Facility Planning
1986 Effluent BOD5
1986 Effluent TSS

The diagram shows the concentration of effluent TSS (Total Suspended Solids) in 1986. The x-axis represents the months of the year, and the y-axis represents the concentration in mg/l. The permit effluent limit is indicated by the horizontal line at the top of the graph. The data points show that the concentration varies throughout the year, with some months exceeding the permit limit.
Contract Documents
City of Beloit, Wisconsin

Wastewater System Improvements
Contract No. 4
Wastewater Treatment Plant

Volume VI of VI  Plans

For information regarding this project, call: Tom Sigmund
(414) 272-1052
Extension 235

December 1988
Contract Documents
City of Beloit, Wisconsin

Wastewater System Improvements
Contract No. 4
Wastewater Treatment Plant

Volume VI of VI  Plans

For information regarding this project, call: Ted Glawitschew
(414) 272-1052
Extension 233

December 1988
Updated July 1989
1992 Stateline Road WWTP
Beloit
WATER POLLUTION CONTROL FACILITY
555 Willowbrook Rd.
Beloit’s Anoxic Selectors
MLE Process
**Initial Selector Performance**

- **SVI (mL/g)**
  - 08/07/92
  - 10/02/92
  - 11/27/92
  - 01/24/93
  - 03/21/93
  - 05/16/93
  - 07/11/93

- **Aerobic SRT**
  - 11 - 13
  - 6 - 9
  - 10 - 13
  - 10

- **Selector F:M**
  - 1.0 - 1.2
  - 0.7 - 1.0
  - 0.8 - 1.2

- **Notes:**
  - Low F:M Filaments Abound
Response:  
- RAS Chlorination  
- Rapid Recovery  
- Friday Lesson!  
- SRT Control via Wasting Calculator

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**POUNDS TO WASTE**: 7985 lbs

**Silt Start Times**
1993 Stress Testing Confirms Results, Beloit Experience Contributes to Industry Selector Design Paradigm Shift
Beloit’s Anoxic Selectors Go Anaerobic, Bio-P From the Get Go
• Great For NR 217 Phase 1 Compliance
Bio-P & Anaerobic Digestion: Early Struvite Experiences

Struvite (MgNH$_4$PO$_4$) Shows Up in Filtrate System
...Yes Sir...Struvite!!!
Struvite Mitigation

Also Helps Control Sidestream P Loads
It’s Been a Rewarding 25 Year Journey…
...With Its Share of Fun!
Bottom Line...Results

- **Effluent Quality**
- **Community Service & Return on Invested Trust**
- **Capacity for the Future**
  - Original 8 MGD/25,000 ppd BOD
  - Mid 90s Rerate 11.3 MGD/37,000 ppd BOD