



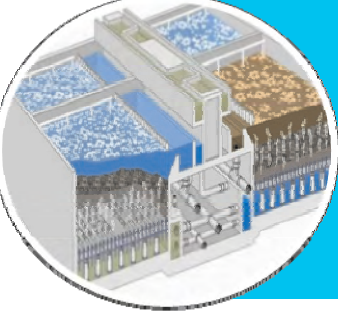
BIOFOR®

Binghamton-Johnson City Joint Sewage Treatment Plant

Vestal, New York
44.4 MGD BAF SYSTEM

INFILCO
BIOLOGICAL GROUP





Binghamton-Johnson City Joint Sewage Treatment Plant

Vestal, NY

INFILCO BIOFOR®

QUICK FACTS:

>FLOW RATE:

70 MGD Peak Flow, 44.4 MGD
Max Month Flow, 34.3 MGD
Average Flow

>PERMIT: BOD₅ < 18 mg/l,
TN < 6 mg/l, TSS < 20 mg/l

>NUMBER OF UNITS: 20

>START DATE: September
2001

BACKGROUND

The Binghamton-Johnson City Joint Sewage Treatment Plant (BJCJSTP) was under New York Consent Order to expand its wastewater treatment facilities to meet effluent limits for discharge to the Susquehanna River, a Chesapeake Bay tributary. The plant upgrade was necessary to increase secondary treatment max month flow capacity up to 44.4 mgd and peak flow capacity up to 70 MGD.

PILOT

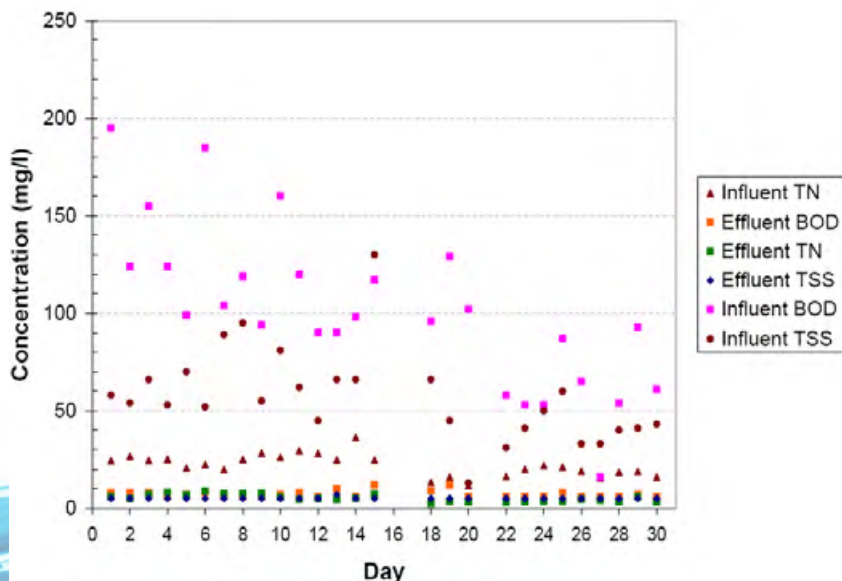
A 5-month pilot study of a three stage Biofor® arrangement for carbon removal, nitrification and denitrification was conducted. Based on the loading criteria established by the pilot study, it was determined that the full scale expansion

would fit within the existing site limits. It would also allow elimination of the peak wet weather bypassing associated with the then existing activated sludge process.

SOLUTION

A conventional activated sludge expansion would require a significant increase in plant area—which is not available in the plant's immediate vicinity. A preliminary facility study determined that biological filters would be cost effective in meeting the above treatment objectives and would fit within the existing plant site. A full-scale Biofor® system from Infilco Degremont Inc. was selected as the most cost-effective solution. The system consists of 8 C-stage cells for BOD removal, 8 N-Stage cells for nitrification and 4 DN-stage cells for denitrification. The Biofor® fits well in the constrained site and removes the need of any secondary clarifiers.

RESULTS



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