



In the Stream

Fields Point - Rhode Island

Plant Retro-Fit and Upgrade

Fields Point treats approximately 45.5 MGD of wastewater in dry weather, serving customers in parts of Providence and surrounding communities.

The facility is a combined system that treats stormwater flows during rain events up to about 65 MGD.

During wet weather conditions, influent flow to the secondary treatment process consists of both storm water flow and sanitary wastewater up to a maximum permitted flowrate of 77 MGD and can route the added flows through primary treatment and disinfection up to 123 MGD.

The total treatment capacity at the Fields Point WWTP is 200 MGD and influent flows in excess of 200 MGD are discharged directly to the Providence River.

As the plant aged, it became necessary to RetroFit a major portion of the treatment units. ClearStream was awarded this job after competitive bidding. The original award was for a suction header design for the Secondary Clarifiers. At a pre-engineering meeting on site, the engineers from ClearStream questioned the plant operating personnel as to their operating procedures and conditions. It was determined that the plant normally operates with a very low sludge bed. The ClearStream representative pointed out that a suction header was not a design well suited for this type of operation due to the need for the blanket to cover the entire header in order to prevent excessive water draw off.

After presenting the various types of designs which were available it was agreed that the plant would operate much better and with a thicker sludge if the design were changed to a suction pipe. The reason for this is that the suction pipes can be individually adjusted to account for the low sludge volume at the outside diameter of the unit. ClearStream was able to revise their quote and their offering and provide the correct design for the plant operation.



ClearStream Scope of Supply:
(3) 120' Spiral Blade Primary Clarifiers.
(6) 125' Suction Pipe Secondary Clarifiers
(3) 50' Cage Drive Thickeners



Individual Suction Pipe Control Valves



120' Spiral Blade Primary Clarifier



125' Suction Pipe Secondary Clarifier

**CLEARSTREAM OFFERS A COMPLETE LINE OF WATER AND WASTEWATER
TREATMENT EQUIPMENT FOR MUNICIPAL,
INDUSTRIAL, POWER, AND MINING APPLICATIONS.**

Headworks

Grit Detritors

Sedimentation Equipment

Segmented Rake, Plow Style

Spiral Blade Design

Suction Header Clarifiers

Suction Pipe Clarifiers

Solids Contact Clarifiers

RapidStream™ - High-rate Solids Contact
Clarifier/Thickeners

Rim Drive Clarifiers

Thickeners

DAF Units

Circular

Rectangular

CPI Type Oil/Water Separators

Rectangular

Packaged

API Type Oil/Water Separators

Rectangular

Circular

Walnut Shell Filters

Standard

Custom

Anaerobic Digester Covers

Buoyant Truss Steel Covers

Gasholder Truss Steel Covers

Radial Beam Fixed Steel Covers

Radial Beam Gasholder Steel Covers

Dual Membrane Gasholder Covers

(Tank Mount-

Biological Process Equipment

ClearFlo™ Jet Aeration Systems

ClearFlo™ Bullseye Oxidation Channel™

ClearFlo™ Sequencing Batch Reactors

ClearFlo™ Continuous Loop Reactors

ClearFlo™ Process Optimization/Retrofits

Trickling Filters

Mechanically Driven Distributor Arms

**PRE™ Heavy Duty Drives
(New and Replacement)**

Column Mounted Cage Drives

Bridge Mounted Shaft Drives

Dual Cage Drives

Dual Shaft Drives

Cage Drives with Lifts

Shaft Drives with Lifts

Multi-Pinion Cage Drives

Multi-Pinion Shaft Drives

Direct Cage Drives

Direct Shaft Drives

Hydraulic Drives

Rim Drives

Field Service and Training

Retrofit Service

Tankage and Erection

Process Audits

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Water & Wastewater Treatment Solutions
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