

# EQUAN©X SYSTEMS® Equajet® High Efficiency Nitrogen Removal System

The EquaJet<sup>®</sup> is a unique system based on utilizing jet aeration for mixing and recycle flow transfer, between tanks, using the same motive recirculation pump.

The high recirculation rate of the EquaJet system provides efficient nitrate and/or anoxic recycle rates to accomplish biological nutrient removal (and enhanced nutrient removal) in a multi-stage system. The EquaJet design approach improves biological phosphorus and nitrogen removal while reducing energy consumption and capital costs.

The EquaJet is being used in both municipal and industrial process applications. In many cases, the EquaJet is applied to the EquaReact<sup>®</sup> system to provide mixing, aeration and transfer of recycle flow between tanks.





## **Realized Value:**

- Capital cost savings due to reduced pumping and mixing equipment
- Improve energy efficiency
- Process control simplicity
- Better treatment performance with maximized mixed liquor recycle

## **Operational Value of the EquaJet Process:**

Typically, a pumping system is designed to provide a design nitrate recycle flow rate (Q) between 2Q (200%) and 4Q (400%) of the Average Daily Flow (ADF). The EquaJet<sup>®</sup> system can provide a significantly higher nitrate recycle flow rate - up to 12Q (1200%) or more of the ADF with no additional equipment or power needed.



- Municipal and Industrial wastewater flow
- Combined municipal and industrial flows
- New treatment facilities
- Plant expansions
- Plant BNR or ENR upgrade (Bio P and TN reduction)
- Retrofit into existing facilities

**Summary of Benefits:** 

Reduce capital cost

Minimize pumping equipment

Reduce energy consumption





#### Note:

See Parkson's brochures for more details on EquaReact<sup>®</sup> (biological process) and VariOx<sup>™</sup> (jet aeration and mixing system).





Improve biological treatment performance

High efficiency biological TN and P removal

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