

## Mazzei Injector Corporation AirJection System Oxygen Transfer Requirement Calculation

Customer:

Project:

Purpose For Aeration:

Process (SBR, Lagoon etc.):

The following information is needed for design of an aeration system for an Activated Sludge Wastewater Treatment Process. Please try to provide as much of the information as possible.

### Design Parameters

Average Design Flow, ADF	m <sup>3</sup> /day	
Influent Loading, @ ADF, BOD5	mg/l	
Total Kjedahl Nitrogen, TKN	mg/l	
Peak Flow, PF	MGD	
Influent Loading, @ PF, BOD5	mg/l	
Total Kjedahl Nitrogen, TKN	mg/l	
Effluent Loading, BOD5	mg/l	
Total Kjedahl Nitrogen, TKN	mg/l	

### Aeration Basin Dimensions

Aeration Basin Volume	m <sup>3</sup>	
Aeration Basin Water Depth	m	
Aeration Basin Length/Width	m	
Aeration Basin Slope of Sides		

### Process Operating Parameters

Mixed Liquor Volatile Suspended Solids (MLVSS)	mg/l	
Food/Microorganism Ratio	Kg/Kg	
Sludge Yield, Y, VSS/BOD5	Kg/Kg	
Specific Decay Rate, Kd	Kg/day	
Design MCRT (Sludge Age)	Days	
Denitrification Credit Claimed?	Yes/No	
Water Temperature	C	
Operating Dissolved Oxygen	mg/l	
Available Aeration Time	hr/day	
Beta		
Alpha		
Site Elevation	m	

Reference: Wastewater Engineering, Metcalf & Eddy, Third Edition