|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **WASTEWATER TREATMENT PLANT MODELLING FORM** | | | | | | | | | | | |
|  | | | | | | | | | | | |
| 1 | **Client:** |  | | | 2 | | **Project name/location:** | | | | |
|  | Firm name: |  | | |  | | | | | | |
| Contact person: |  | | |
| Phone: |  | | |
| Email: |  | | |
|  | | | | | | | | | | | |
| 3 | **Units to be modelled:** | | | | |  | | | | | |
| * **Preliminary treatment** | | | | | | * **Primary treatment** | | | | | |
| Pumping station | | | | | | Circular primary clarifier | | | | | |
| Equalization tank | | | | | | Rectangular primary clarifier | | | | | |
| Grit chamber | | | | | | High-rate clarifier | | | | | |
|  | | | | | | In-line chemical dosing | | | | | |
|  | | | | | | Belt microscreening | | | | | |
|  | | | | | | | | | | | |
| * **Biological treatment** | | | | | | | | | | | |
| * Suspended growth processes | | | | | | * Attached growth processes | | | | | |
| Completely-mixed tank | | | | | | Trickling biological filter | | | | | |
| Anoxic CSTR | | | | | | Biological aerated filter | | | | | |
| Plug-flow tank | | | | | | Advanced biological aerated filter | | | | | |
| Dual-inlet plug-flow tank | | | | | | Rotating biological contactor | | | | | |
| Plug-flow tank with aeration header | | | | | | Submerged biological contactor | | | | | |
| Closed basin hygh purity oxygen (HPO) | | | | | | Integrated fixed film activated sludge reactor (IFAS) | | | | | |
| Membrane bioreactor (MBR) | | | | | | Moving bed biofilm reactor (MBBR) | | | | | |
| Completely-mixed membrane bioreactor (MBR) | | | | | | Upflow anaerobic sludge blanket | | | | | |
| Anaerobic membrane bioreactor (MBR) | | | | | | Membrane-Aerated bioreactor – hollow fiber | | | | | |
| Continous flow sequencing reactor | | | | | | Aerobic granular sludge reactor | | | | | |
| Sequencing batch reactor (SBR) | | | | | |  | | | | | |
| Advanced sequencing batch reactor (SBR) | | | | | | * Secondary clarifiers | | | | | |
| Manual sequencing batch reactor (SBR) | | | | | | Circular secondary clarifier | | | | | |
| Oxidation ditch | | | | | | Rectangular secondary clarifier | | | | | |
|  | | | | | |  | | | | | |
| * **Tertiary treatment** | | | | | | * **Sludge treatment** | | | | | |
| Upflow denitrification filter | | | | | | Dissolved air flotation (DAF) | | | | | |
| Downflow denitrification filter | | | | | | Thickening | | | | | |
| Sand filter | | | | | | Anaerobic sludge digestion | | | | | |
| Membrane filter | | | | | | Chemical sludge pretreatment | | | | | |
| Disinfection | | | | | | Dewatering | | | | | |
| Disc microscreen | | | | | | Drum microscreening | | | | | |
| Advanced oxidation process | | | | | | Hydrocyclone solids separation | | | | | |
|  | | | | | | Struvite recovery | | | | | |
|  | | | | | | Drying | | | | | |
|  | | | | | | Incineration | | | | | |
|  | | | | | | | | | | | |
| 4 | **Wastewater treatment plant influent/effluent characteristics:** | | | | | | | |  | 5 | **Modelling scope:** |
| * Influent flowrates: | | | | | | | | |  | |
|  | Daily average flowrate on dry weather (Qd.avg) | |  | | | | | m3/d |
| Daily maximum flowrate on dry weather (Qd.max) | |  | | | | | m3/d |
| Hourly peak flowrate on dry weather (Qh.peak.dw) | |  | | | | | m3/h |
| Hourly peak flowrate on wet weather (Qh.peak.ww) | |  | | | | | m3/h |
| Minimum flowrate (Qh.min) | |  | | | | | m3/h |
|  | | | | | | | | |
| * Concentrations: | | | Influent | Effluent | | | |  |
|  | Total suspended solids (TSS) | |  |  | | | | mg/L |
| Biochemical oxigen demand (BOD5) | |  |  | | | | mg/L |
| Consumul Chimic de Oxigen (COD) | |  |  | | | | mg/L |
| Total nitrogen (TN) | |  |  | | | | mg/L |
| Total Kjeldhal nitrogen (TKN) | |  |  | | | | mg/L |
| Ammonium nitrogen NH4-N) | |  |  | | | | mg/L |
| Organic nitrogen (Norg) | |  |  | | | | mg/L |
| Nitrates nitrogen (NO3-N) | |  |  | | | | mg/L |
| Nitrites nitrogen (NO2-N) | |  |  | | | | mg/L |
| Total phosphorus (TP) | |  |  | | | | mg/L |
|  | | | | | | | | | | | |
| 6 | **Existing operation mode:** | | | | | | | | | | |
|  | | | | | | | | | | | |