

New Forest Paper Mills LP Scarborough, ON

Opportunity:

Re-use effluent water in the plant

Method:

To install water recovery system such as water could be treated through a polishing filter and could be used back in the mill.

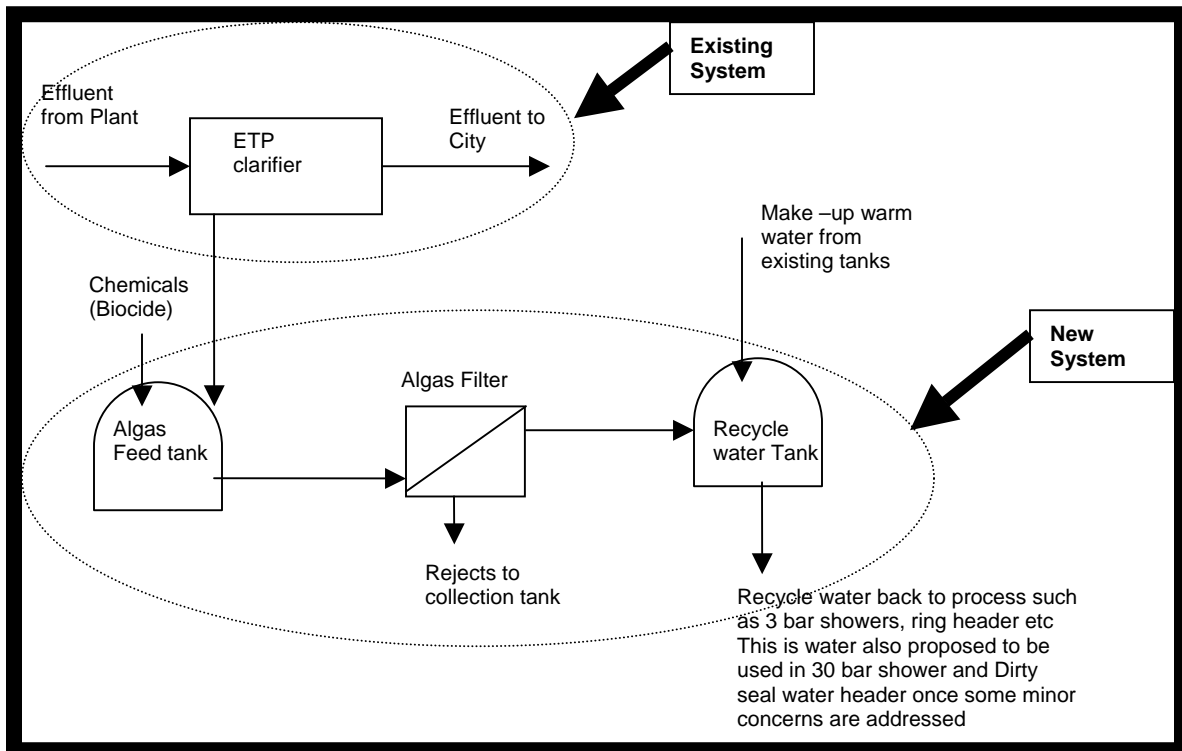
Background:

Plant uses lot of city water which picks up lot of heat in process. The effluent discharge is huge loss to mill in terms of water and heat content in it.

The mill is losing money through purchase of fresh water from City and discharge of warm water as effluent back to the city.

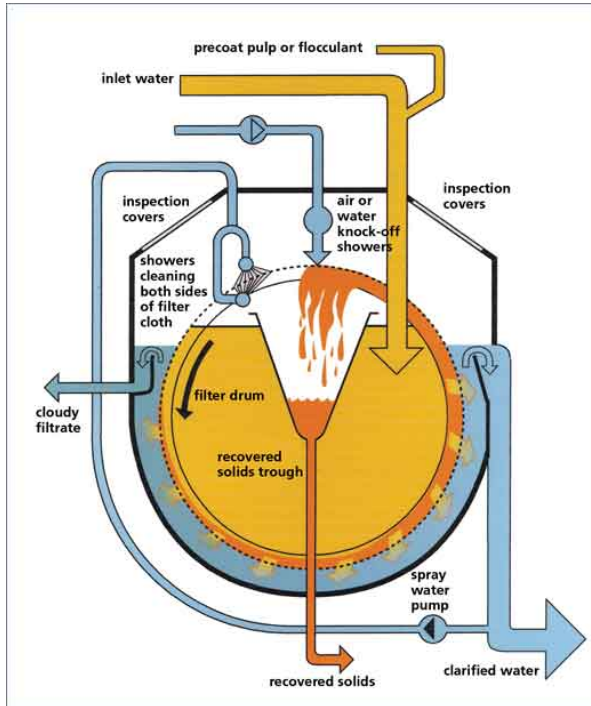
Description:

Simple flow sheet for the project:



Concept:

Filter is most critical component of the project. Algas filters with Micro filter concept have been selected for this process. The Algas Micro filter is designed to operate as an independent and continuous cleaning process. The water to be cleaned enters the inlet box at one end of the filter and passes into the open end of the corrugated drum. Easily changeable filter segments mounted on the drum can be fitted with 30 microns filter cloths.



Inside the slowly rotating drum the suspended solids build up a mat on the filter cloth, further improving the filtration efficiency of the medium. On reaching the top of the drum the deposits are released by air or water sprays, into the internal recovery trough. This is followed by self-cleaning showers to clean the cloths prior to the next filtering cycle.

Water Re-Use:

The clarified water from our Micro filters can be directly re-used without further treatment, as the particle size of any solids in the filtrate is "microscopic."

Benefits:

Savings have been in account of

1. Water Savings
2. Gas savings on account of return of warm water
3. Increase in Biogas production as result of increase in concentration of dissolved solids on account of reduction of water coming to ETP
4. Rebates from local water and gas utilities

Project Cost: \$800, 000

Annual water savings	: 362, 427 m ³ / year (1050 m ³ / day)
Annual natural gas savings	: 1,354,093 m ³ / year (50,548 GJ/ year)
Simple Payback	: 1.4 years

Mill Contact:

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