

# ENVIRONMENTAL FOOTPRINT COMPARISON TOOL

A tool for understanding environmental decisions related to the pulp and paper industry



## EFFECTS OF RECYCLED FIBER USE ON DISCHARGES TO WATER

### Tissue Sector

Where tissue is manufactured at mills with virgin pulping, the most common virgin pulps produced are bleached kraft (sulfate) and bleached sulfite, although a few bleached sulfite mills remain. Therefore, the co-benefits and trade-offs examined in this section compare recycled tissue manufacturing with tissue manufactured from virgin bleached kraft pulp.

There is very little literature comparing recycled to virgin tissue production. The recommendations issued by the European Commission are shown in the following table. The EC analysis suggests that BOD, COD (chemical oxygen demand), and TSS in treated effluents from deinked tissue mills will tend to be lower than those from bleach kraft mills manufacturing tissue. This is confirmed by statistical analysis of NCASI site-specific data.

Table R16.

Mill Description	Effluent BOD (kg/tonne)	Effluent COD (kg/tonne)	Effluent TSS (kg/tonne)	Reference
Bleached kraft (sulfate) pulp mills using Best Available Techniques	0.3 to 1.5	8 to 23	0.6 to 1.5	EC BREF 2001
Deinked tissue mill using Best Available Techniques	<0.05 to 0.5	2.0 to 4.0	0.1 to 0.4	

### References

European Commission BAT Reference (BREF). 2001. *Integrated Pollution Prevention and Control (IPPC) reference document on best available techniques in the pulp and paper industry*. Seville, Spain: European Commission Joint Research Centre. <http://eippcb.jrc.es/reference/pp.html>