

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

Fine Paper Sector

The fine paper sector includes a large number of product types. The product most commonly examined for environmental footprint decisions with respect to recycling is office paper (also known as copy paper or, in the industry's terminology, uncoated free sheet). This section, therefore, focuses on uncoated free sheet/copy paper. A discussion of the effects of recycled fiber on paper properties is beyond the scope of this Tool. The reader should consult with manufacturers to better understand the constraints on fiber furnish that may be associated with the manufacture of products with specific properties.

Where fine paper is manufactured at mills with virgin pulping, the most common virgin pulp produced is bleached kraft (sulfate). Therefore, the co-benefits and trade-offs examined in this section compare recycled copy paper manufacturing with copy paper manufactured from virgin bleached kraft pulp.

A number of mills can produce both virgin pulp and recycled pulp for use in copy paper. Therefore, in many situations, the effects of increasing recycled content will require examination of how it affects specific mills. The available literature does not provide clear indications as to whether BOD and TSS loads from recycled fine paper mills are different from virgin fine paper mills, although COD (chemical oxygen demand) loads are lower in recycled mill effluents. Statistical analysis of NCASI site-specific data suggests that BOD and TSS loads in treated effluents will tend to be lower in recycled fine paper mills than those from virgin fine paper mills.

Table R17.

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 mill using Best Available Techniques	<0.05 to 0.2	2.0 to 4.0	0.1 to 0.3	
Typical virgin copy paper mill	3.15	45.85	5.05	Paper Task Force 2002
Typical recycled copy paper mill	3.05	13.8	3.45	

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>

Paper Task Force. 2002. *Paper Task Force recommendations for purchasing and using environmentally preferable paper*. <http://epa.gov/epawaste/consERVE/tools/warm/pdfs/EnvironmentalDefenseFund.pdf>