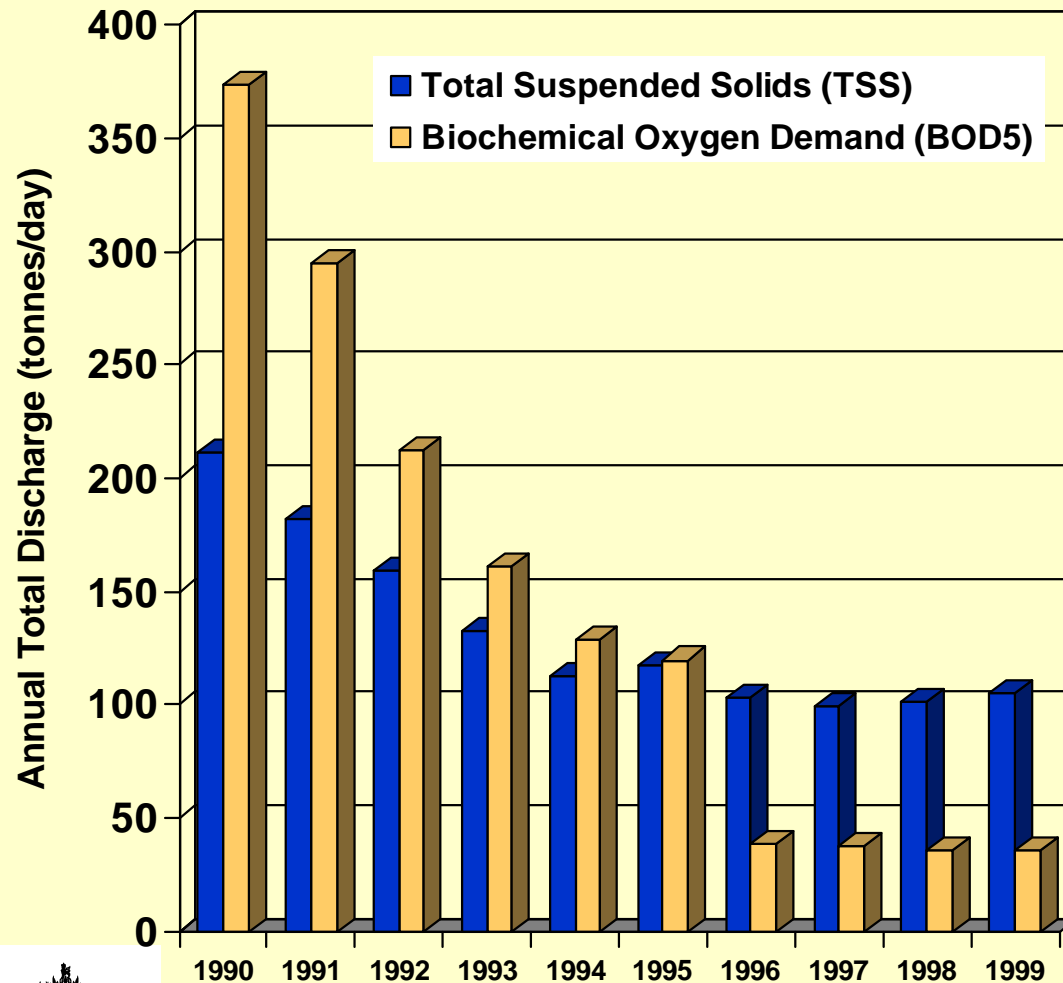


1999 Pulp & Paper Effluent Discharges (t/day)



There are 22 pulp and paper mills in British Columbia that discharge effluent directly to surface watercourses and one mill, Chetwynd Pulp Co., that has zero effluent discharge. A paper mill and a paper recycle mill in Vancouver discharge to the GVRD sewer system*.

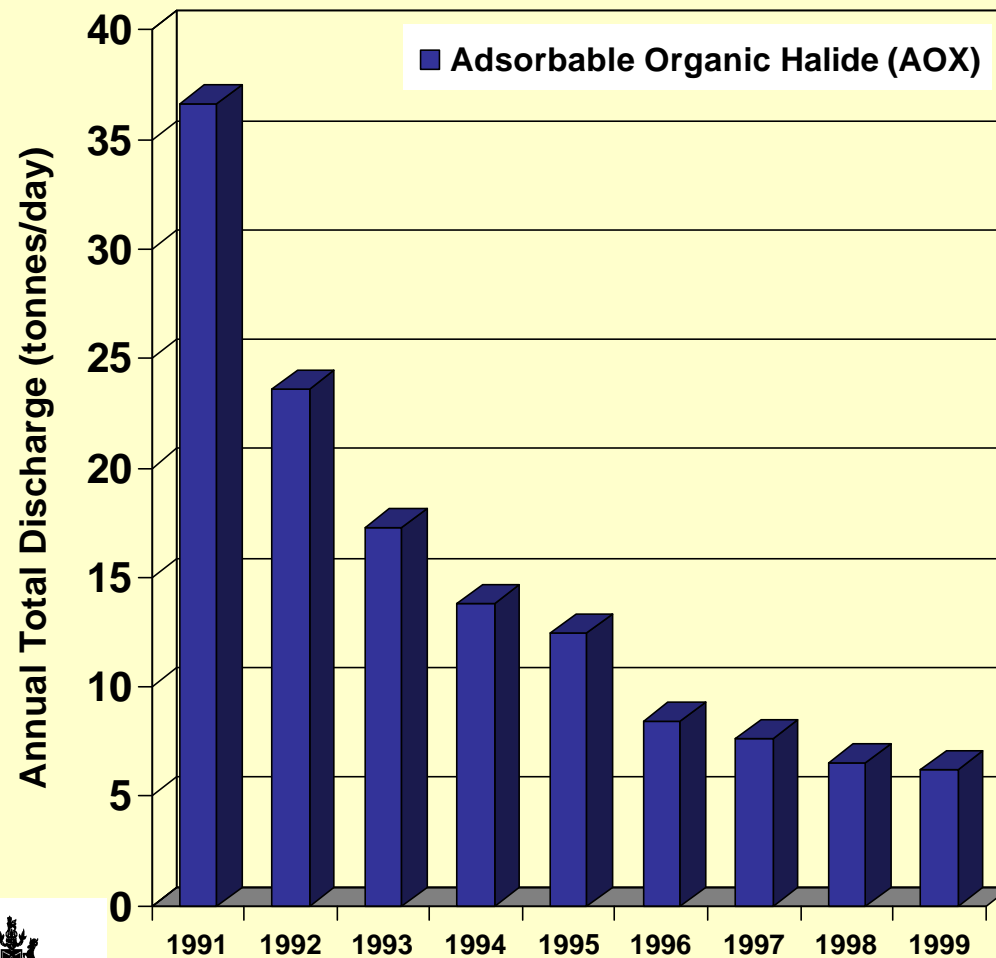
From 1990 to 1999, the 22 direct discharge mills reduced TSS by 50% and BOD₅ by 91%.

Fish survival improved from 50% survival in 70% effluent to 99% survival in 100% effluent.

* not included in this summary - these mills are permitted by the GVRD

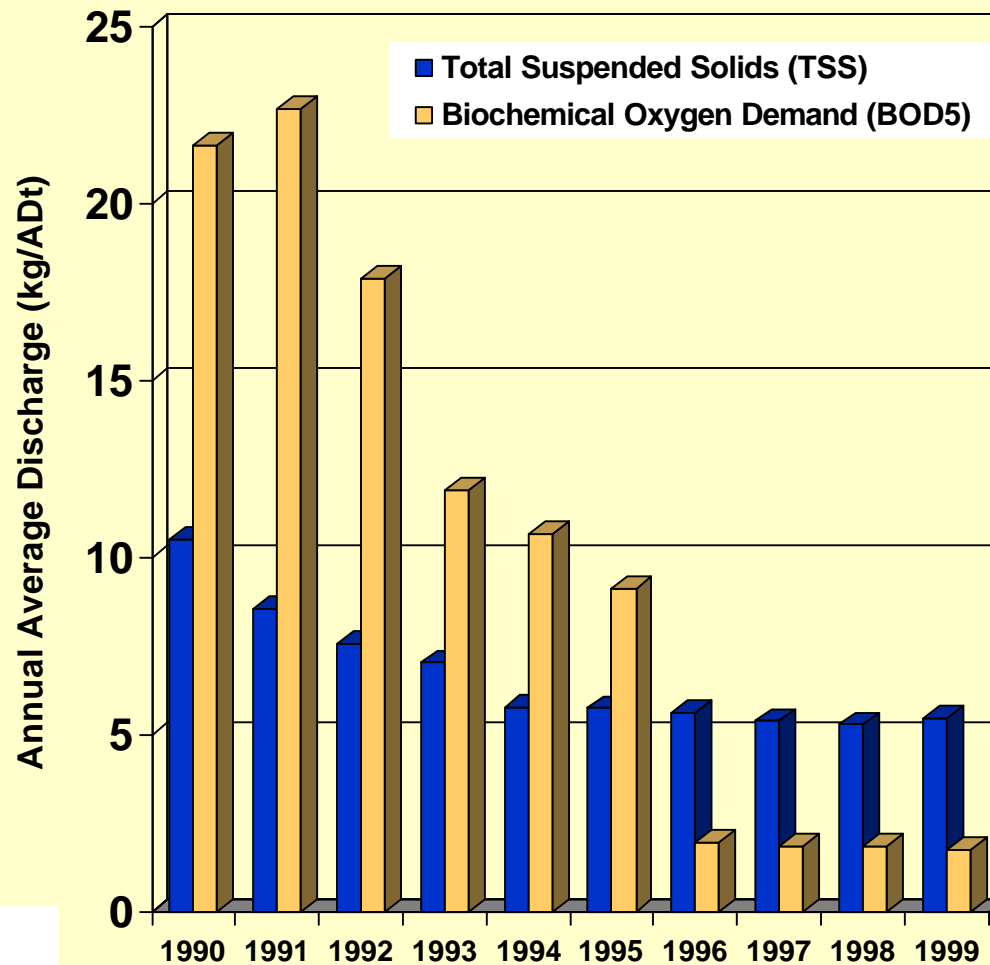


1999 Pulp & Paper Effluent Discharges (t/day)



From 1991 to 1999, AOX was reduced by 83%.

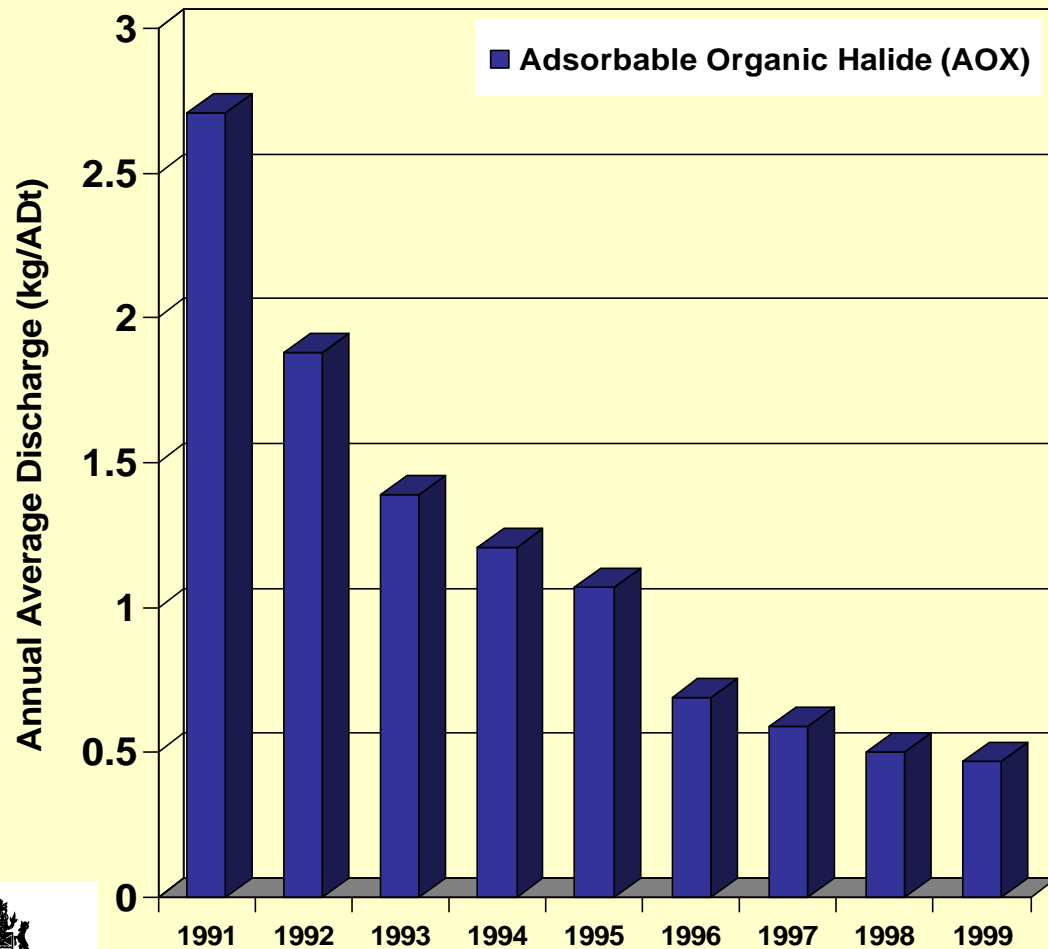
1999 Pulp & Paper Effluent Discharges (kg/ADt)



From 1990 to 1999, the 22 direct discharge mills reduced average TSS discharges from 10.51 to 5.48 kg/ADt.

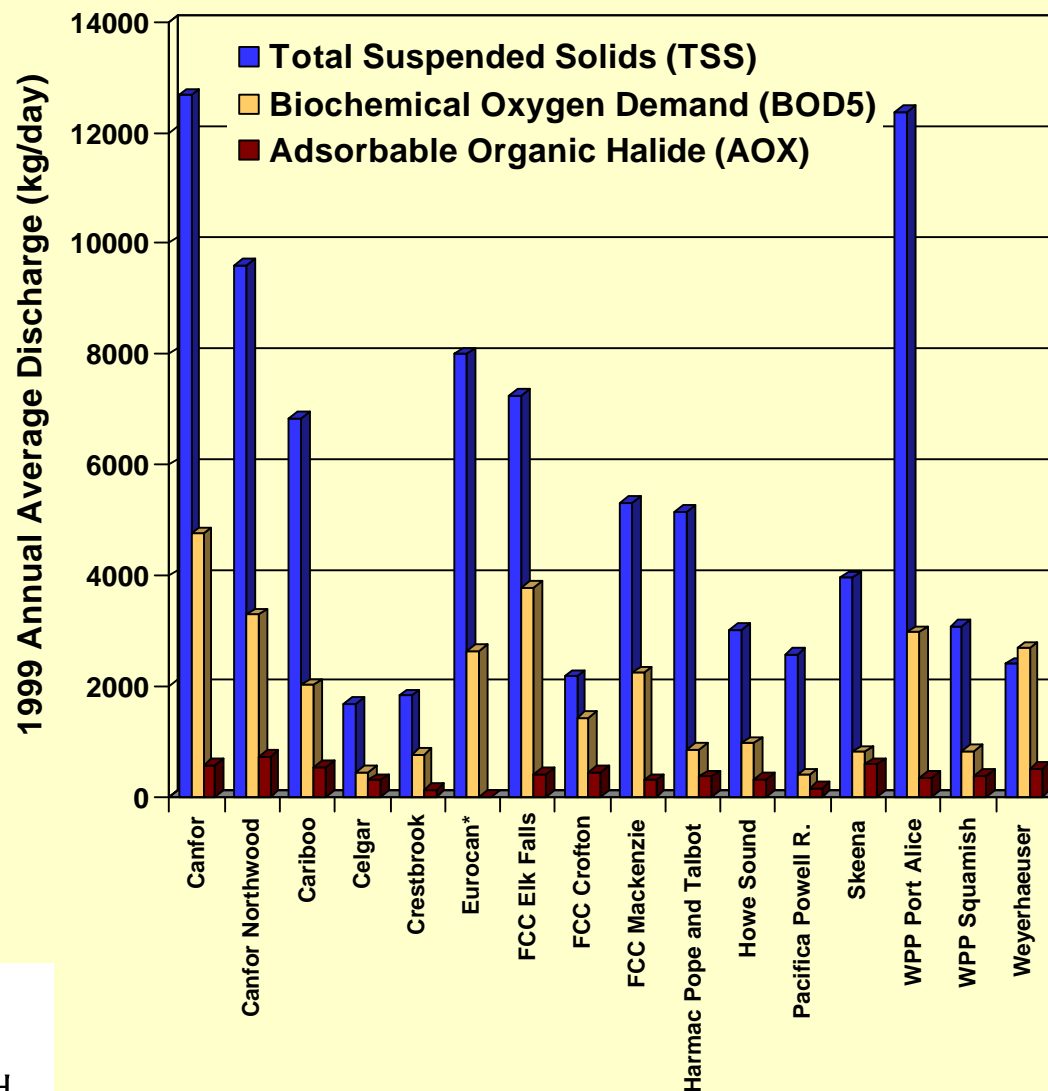
BOD₅ discharges were reduced from 21.63 to 1.76 kg/ADt.

1999 Pulp & Paper Effluent Discharges (kg/ADt)



From 1991 to 1999, average AOX discharges were reduced from 2.71 to 0.47 kg/ADt.

1999 Pulp & Paper Effluent Discharges (kg/day)



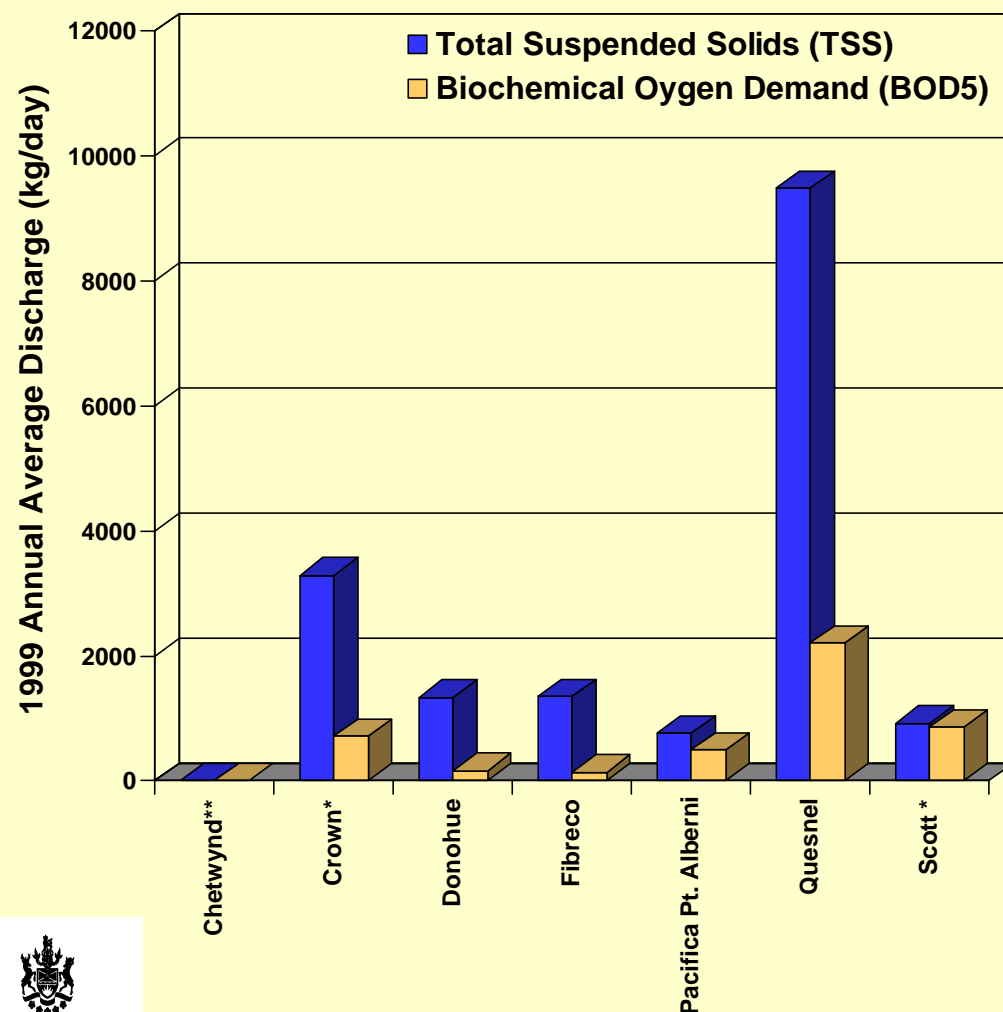
Fifteen of the 22 direct discharge mills are kraft mills and one of the mills, Western Pulp Partnership (Port Alice), is a sulphite mill.

Thirteen of the 14 kraft mills that bleach their pulp have completely substituted chlorine dioxide for chlorine bleaching. The other has committed to complete substitution. ClO_2 greatly reduces generation of AOX.

* does not bleach its pulp and does not generate AOX.



1999 Pulp & Paper Effluent Discharges (kg/day)



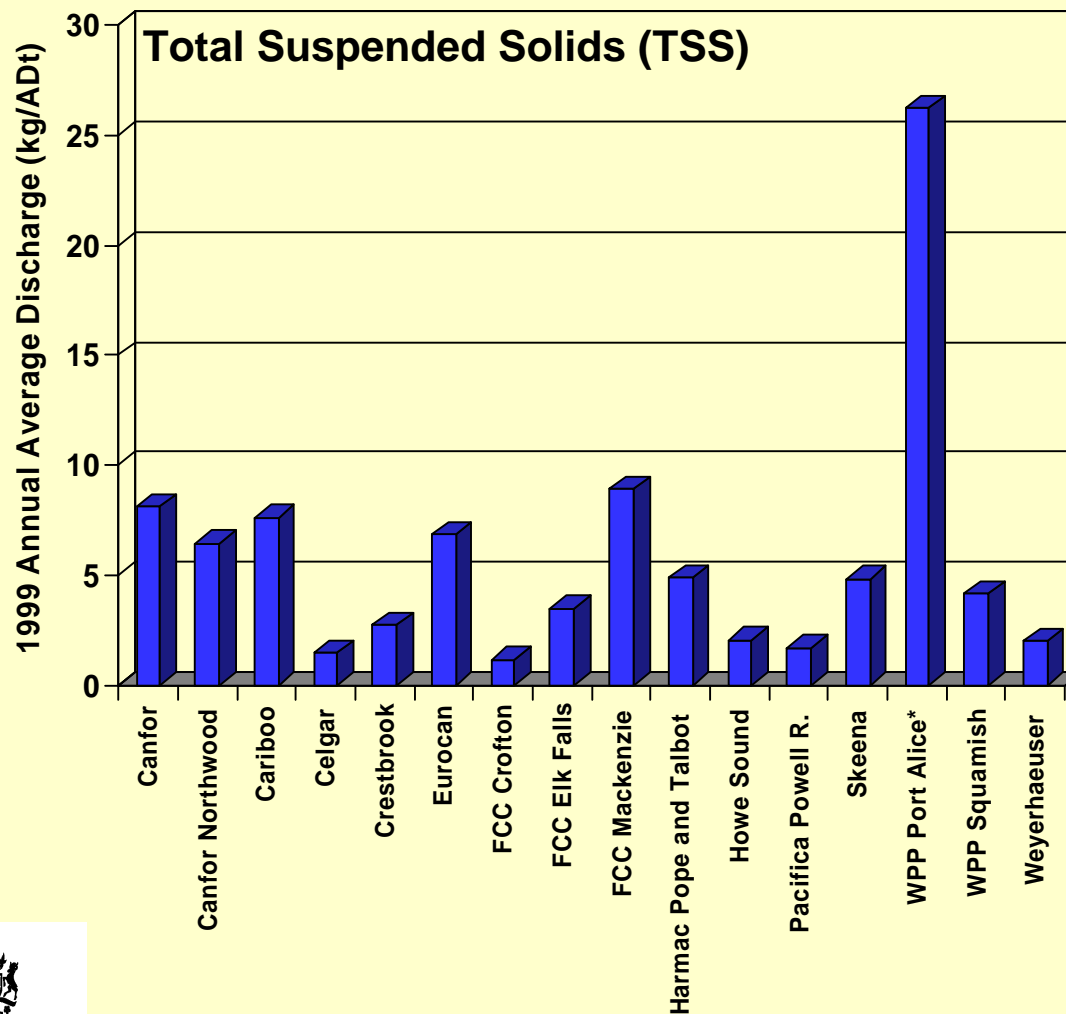
Seven of the 22 direct discharge mills are mechanical pulp mills, tissue mills or board mills and do not use chlorine or chlorine-containing compounds to bleach pulp.

* do not use bleaching chemicals.

** zero effluent discharge.



1999 Pulp & Paper Effluent Discharges (kg/ADt)

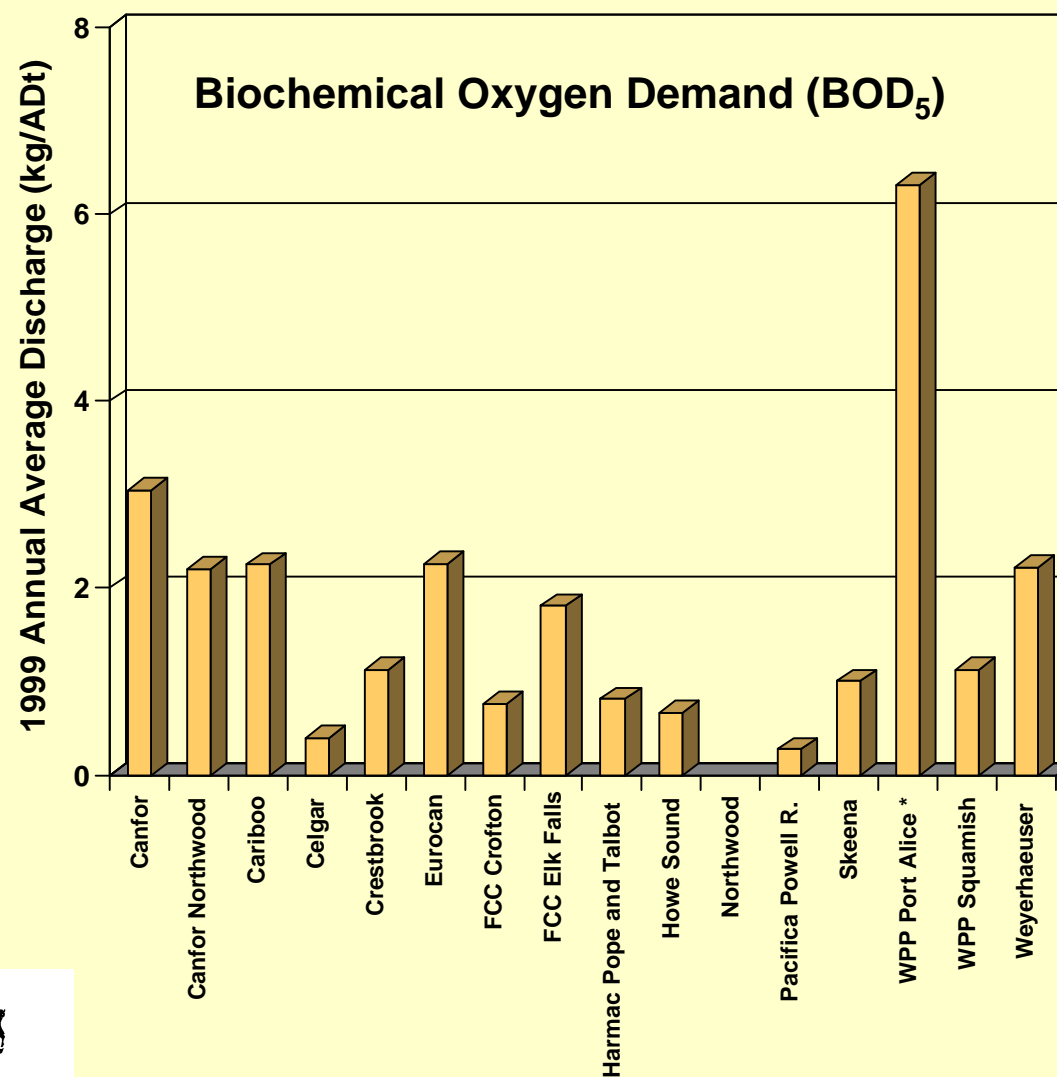


For the 15 kraft mills and 1 sulphite mill, TSS discharges ranged from 0.66 to 27.54 kg/ADt.

* sulphite mill.



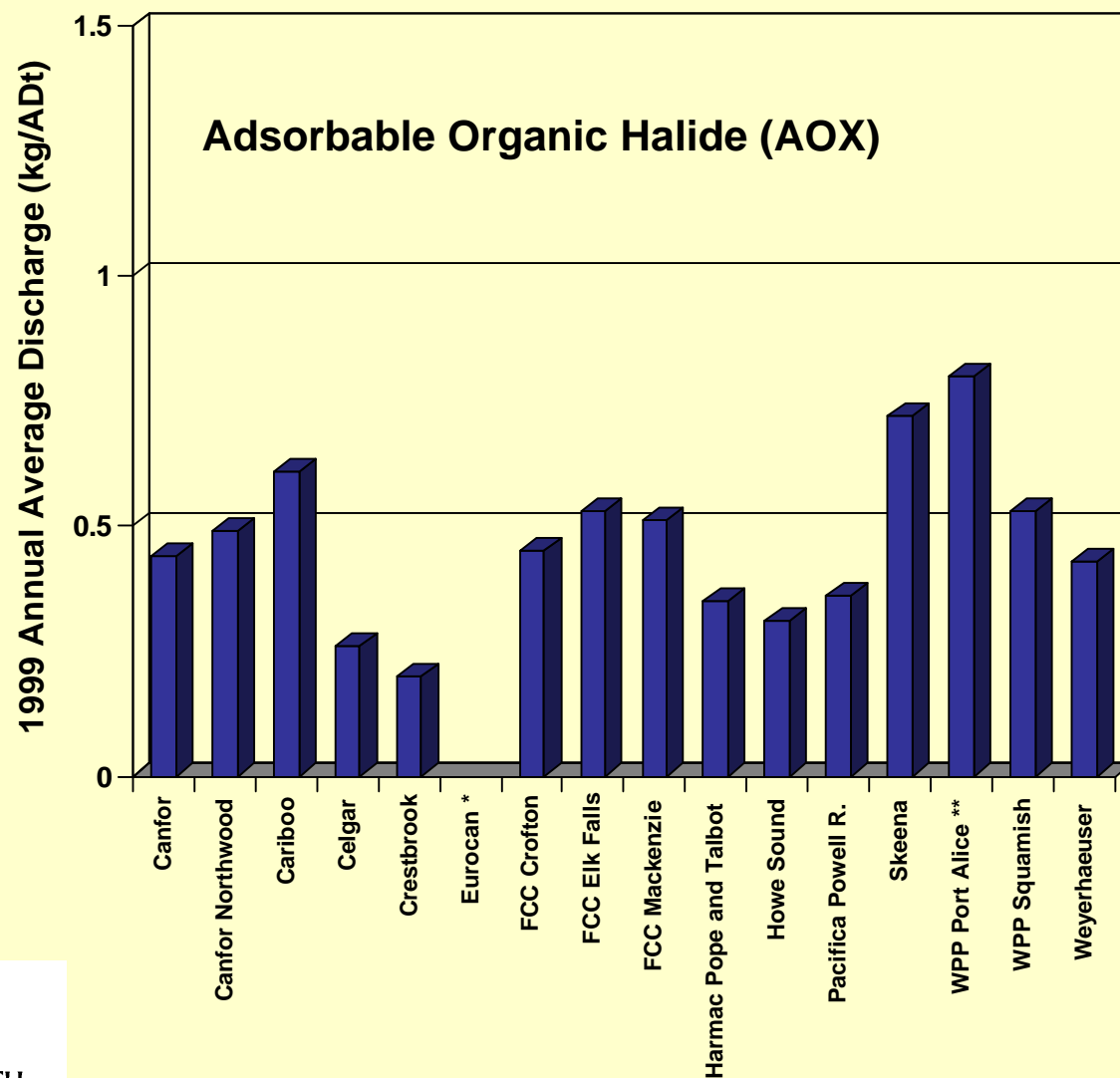
1999 Pulp & Paper Effluent Discharges (kg/ADt)



For the 15 kraft mills and 1 sulphite mill, BOD₅ discharges ranged from 0.27 to 6.33 kg/ADt.

* sulphite mill.

1999 Pulp & Paper Effluent Discharges (kg/ADt)



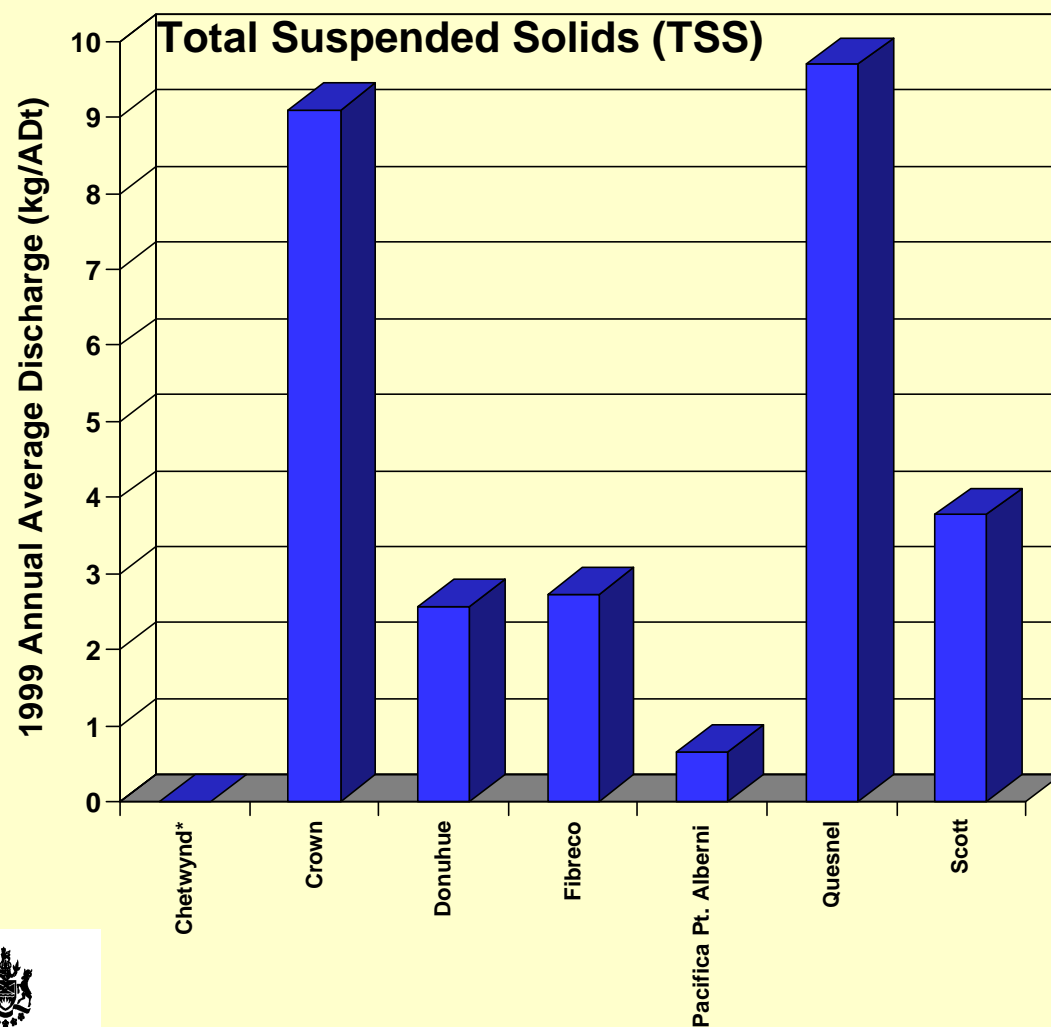
For the 15 kraft mills and 1 sulphite mill, AOX discharges ranged from 0 to 0.80 kg/ADt.

* Eurocan does not bleach its pulp.

** sulphite mill.



1999 Pulp & Paper Effluent Discharges (kg/ADt)

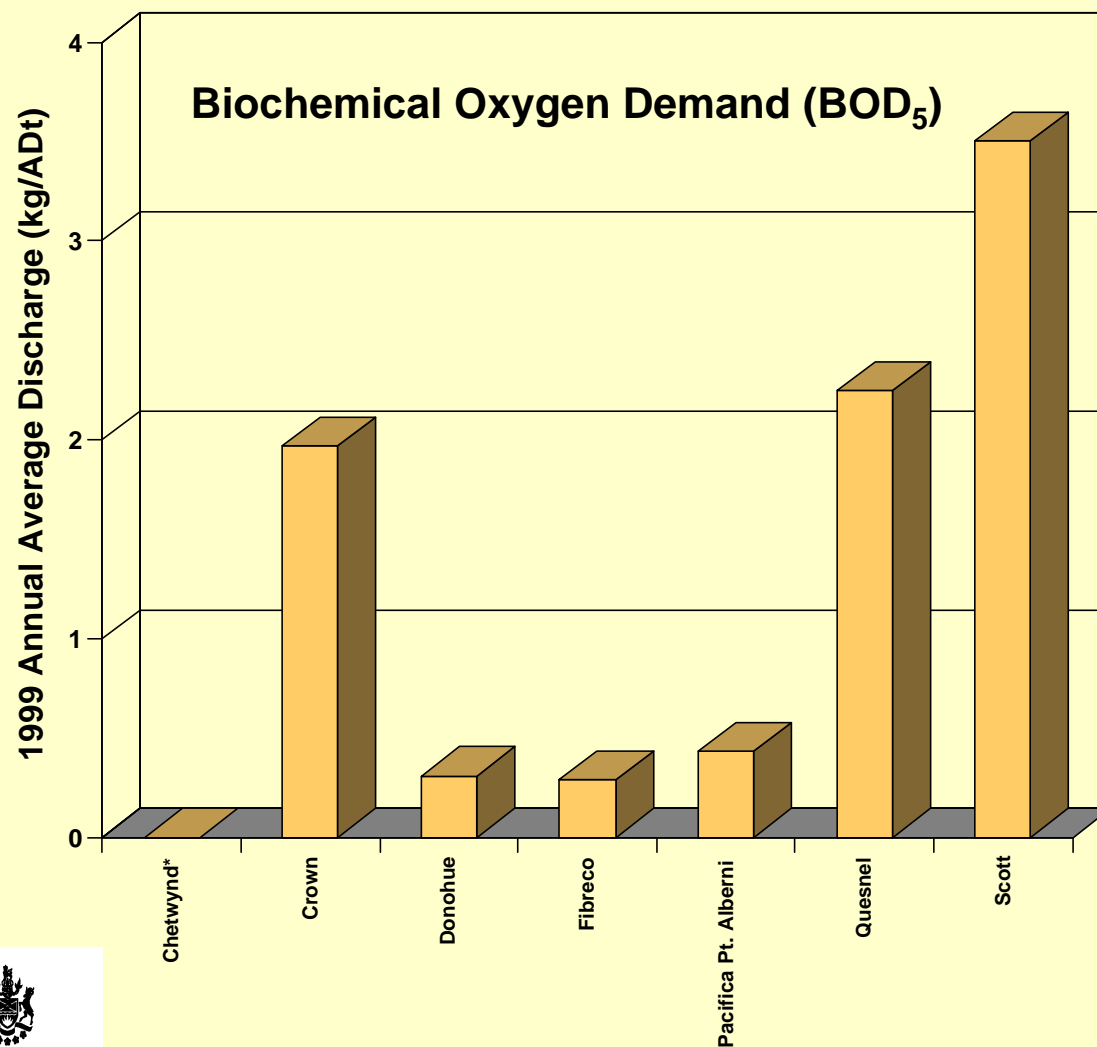


For the 7 non-kraft mills, TSS discharges ranged from 0 to 9.69 kg/ADt.

* Zero effluent discharge.



1999 Pulp & Paper Effluent Discharges (kg/ADt)



For the 7 non-kraft mills, BOD₅ discharges ranged from 0 to 3.50 kg/ADt.

* Zero effluent discharge.

