While estimates such as these help to demonstrate the economic contribution of our water resources, they do not indicate how water should be allocated in any particular time and place. To determine that we need to know the water's marginal value, that is, the value generated by the last small increment of water. Usually, the more water used in any particular use, the lower its marginal value. This explains how water can be very valuable for some purpose, like human consumption, but once the urgent need is met the value of an additional increment of supply may be very low.

These estimates also disguise the fact that these values are generated by a small fraction of Canada's water resources. The uses listed in Table 4.5 are heavily concentrated in a few localities on relatively few waterways. Where these demands are concentrated, the value of water is great. But most of Canada's waters are used for few, if any, of these purposes. Thus, the economic value of water in Canada varies widely.

Table 4.5
ESTIMATES OF THE ECONOMIC VALUE OF WATER, CANADA

Selected Uses	Average Net Value[a] Low ($/000 m³)	Average Net Value[a] High ($/000 m³)	Total Net Value[a] Low (millions of $)	Total Net Value[a] High (millions of $)
Municipal	100	2,430	288	6,968
Irrigation	0	36	0	109
Thermal Power	9	9	169	169
Industrial Uses				
Paper	87	87	251	251
Chemical	76	76	217	217
Primary Metals	16	43	44	118
Petroleum	19	19	10	10
Food & Beverages	30	124	13	53
Sub-Total Withdrawal			**993**	**7,896**
Hydroelectricity			4,226	6,553
Waste Assimilation[b]	1	4	645	2,272
Sports Fishing[c]	20	74	1,677	6,309
Sub-Total Instream			**6,459**	**15,134**
TOTAL			**7,541**	**23,030**

Note:
[a] Values estimated in terms of the maximum amount users would be willing to pay for water in the indicated uses.
[b] Willingness to pay in $/kg of BOD discharged.
[c] Willingness to pay in $/fishing day.

Source: Adapted from Muller, R. Andrew. 1985. "The Socioeconomic Value of Water in Canada". *Research Paper No. 5, Inquiry on Federal Water Policy*. Ottawa.