Supplementary Information

From sources to points of consumption: How water access and practices shape drinking water quality in high-Arctic community.

A. Carabin[1]†^, A. Cassivi[2]†, M. Rodriguez[2], J. Comte[3], C. Dorea[1]

[1]Department of Civil Engineering, University of Victoria, 3800 Finnerty Road
Victoria (BC) Canada
[2]École supérieure d'aménagement du territoire et du développement régional, Université Laval, 2325 Allée des Bibliothèques, Québec (QC) Canada
[3]Institute national de la recherche scientifique, Centre Eau Terre Environnement, 490 rue de la Couronne, Québec, QC G1K 9A9, Canada

^Corresponding author
†Equal contribution

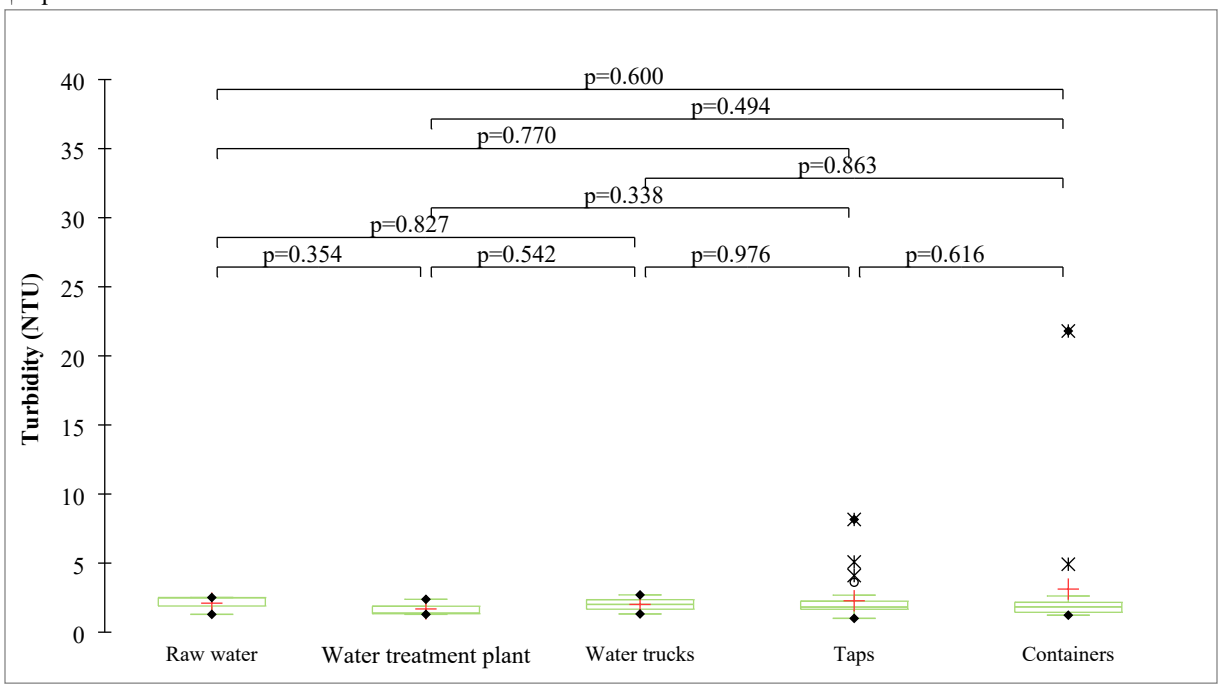

Figure S1: Kruskal-Wallis test for turbidity levels across different sampling locations: 1- raw water, 2- after chlorination, 3- water trucks,4- taps and 5- containers. P-values between two sampling locations are indicated above the box plot (α = 0.05).

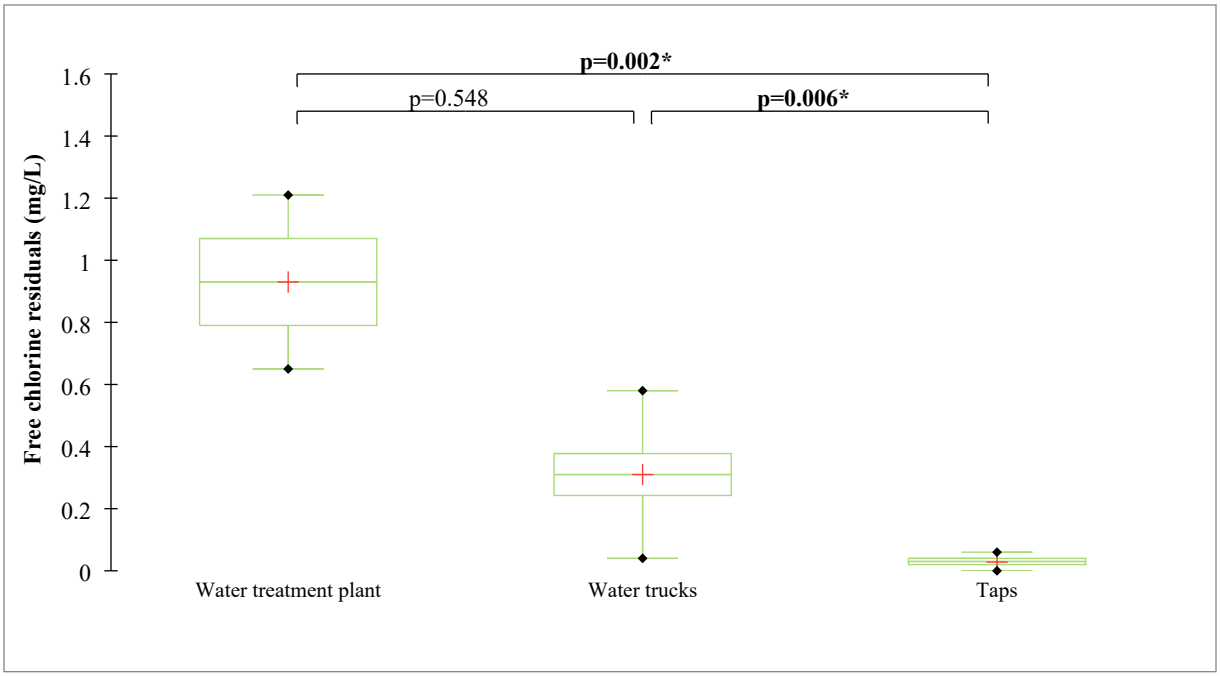

*Figure S2: Kruskal-Wallis test for free chlorine levels across different sampling location where free chlorine is expected: 1- raw water, 2- after chlorination, 3- water trucks,4- taps and 5- containers. P-values between two sampling locations are indicated above the box plot (α = 0.05). The * indicates that difference is significant between the independent group of samples.*

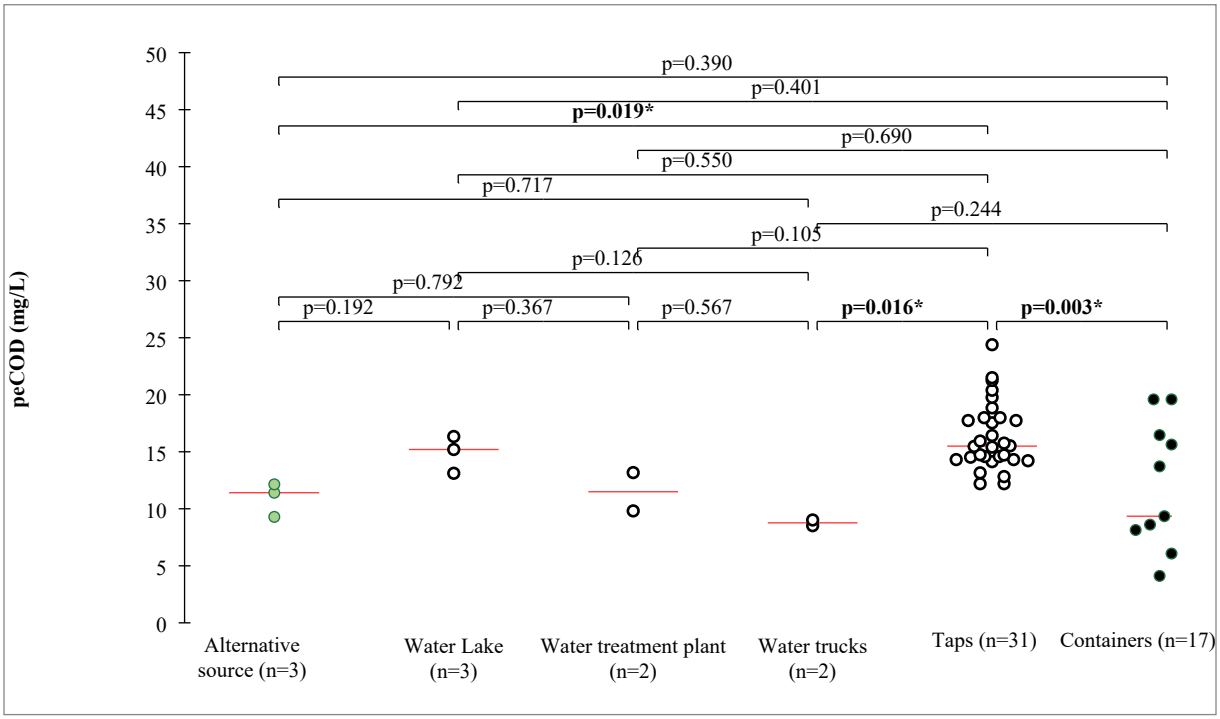

*Figure S3: Kruskal-Wallis test to evaluate statistical differences between peCOD levels from sources (alternative source or water lake) to the point of consumption (tap water or containers). The sampling point "Water treatment plant" represents the water quality after chlorination. Black circles represent the municipal supply system, and the green circles represent the alternative collection method (alternative source). Containers can contain water from the alternative source or from the tap. P-values are provided for a significant level at alpha=0.05. The * indicates that difference is significant between the independent group of samples.*

Table S1: Microbial water quality in taps (water and swabs) and storage containers at inhabitants' houses. Results are presented in terms of detection percentages for different levels in CFU/100 ml (<1 ;]1 -100] ,]100-200] ,]200-300] , >300). Containers can contain tap water or water from an alternative source. The samples of tap water refer to public building and domestic tanks.

	Taps – water quality (n = 31)				**Containers – water quality (n = 17)**				**Taps - swabs (n = 31)**		
CFU/100 ml	Total coliforms	*E. coli*	HPC	*P. aeruginosa*	Total coliforms	*E. coli*	HPC	*P. aeruginosa*	Total coliforms	*E. coli*	*Enterococcus*
<1	80.6%	100.0%	0.0%	67.7%	64.7%	94.1%	0.0%	52.9%	87.1%	100.0%	96.8%
1-100	**9.7%**	0.0%	22.6%	25.0%	17.6%	**5.9%**	17.6%	29.4%	6.5%	0%	3.2%
101-200	0.0%	0.0%	25.8%	3.2%	11.8%	0.0%	5.9%	5.9%	3.2%	0%	0%
201-300	0.0%	0.0%	3.2%	0.0%	0.0%	0.0%	0.0%	5.9%	0%	0%	0%
>300	**9.7%**	0.0%	45.2%	3.2%	5.9%	0.0%	76.5%	5.9%	3.2%	0%	0%