



# AEPHIN

## Alberta Environmental and Public Health Information Network

### Domestic Well Water Quality in Alberta

#### Technical Notes

Please see published Alberta Health Domestic Well Water Reports (AH, 2014b) for technical details and results and the Domestic Well Water Quality in Alberta - Fact Sheets (AH, 2014a) for definitions and interpretations. Aesthetic Objectives (AOs) and Maximum Acceptable Concentrations (MACs) are taken from Guidelines for Canadian Drinking Water Quality – Summary Table ([Health Canada, 2020](#)). Under each parameter with an  icon (tooltip), the “Health Considerations” section provides the basis for the MAC or other guideline derivations in drinking water only, and not for health effects that may occur at much higher concentrations. When the health effects are stated as “None,” this does not necessarily mean that a particular element or parameter does not have any known (adverse) health effect at much higher concentrations than the MAC and/or AO. When there is no Health Canada drinking water guideline, some WHO guidelines may be used for comparison only.

AOs and MACs are subject to change as Health Canada updates or generates new guidelines values from time to time for all parameters used in the domestic well water quality and any other water related data on the AEPHIN website. These values are only as recent as *March 2021*. **Please note that the new(er) Health Canada guidelines supersede the reported guidelines in the existing Alberta Health reports.**

AEPHIN aims to update and maintain its webpages and databases annually to reflect new data or new/updated regulatory guidelines (e.g., Health Canada). Please note that these changes may create deviations from the results and statistical analyses presented in the AH reports posted online in PDF format as they are static in nature. In addition, each data update would result in change of the overall statistics (e.g., min, median, and max). **Please use these numbers at your own risk. To retrieve official numbers, please download the original datasets that are posted on the Open Government Portal for [routine chemistry](#) and [trace elements](#).**

For Trace Elements and other parameters, statistical minimum (Min) for the purpose of AEPHIN has been set to half of the level of detection (LOD) for statistical calculations, if a parameter has measurement or concentration below LOD.

#### References

[AH \(2014a\)](#). Domestic Well Water Quality in Alberta: Fact Sheets. Health System Accountability and Performance Division, Health Protection Branch, Alberta Health, Edmonton, Alberta.

[AH \(2014b\)](#). Domestic Well Water Quality in Alberta: 2002-2008 Characterization: Physical and Chemical Testing. Health System Accountability and Performance Division, Health Protection Branch, Alberta Health, Edmonton, Alberta.

[Health Canada \(2020\)](#). Guidelines for Canadian Drinking Water Quality – Summary Table. Water and Air Quality Bureau, Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario.

[Health Canada \(2021\)](#). Guidelines for Canadian Drinking Water Quality: Guideline Technical Document - Aluminum. Water and Air Quality Bureau, Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario.

#### Terms

*Median*: In statistics and probability theory, the median is the number separating the higher half of a data sample, a population or a probability distribution, from the lower half. The median of a finite list of numbers can be found by arranging all the

observations from lowest value to highest value and picking the middle one (e.g., the median of [3, 3, 5, 9, 11] is 5). If there is an even number of observations, then there is no single middle value; the median is then usually defined to be the mean of the two middle values (<http://en.wikipedia.org/wiki/Median>).

*Mean:* For a data set, the terms arithmetic mean, mathematical expectation and sometimes average are used synonymously to refer to a central value of a discrete set of numbers: specifically, the sum of the values divided by the number of values (<http://en.wikipedia.org/wiki/Mean>).