

Summary of proposed Drinking Water Standards

What are Drinking Water Standards?

The Drinking Water Standards (the Standards) have been developed to make sure that all drinking water is safe for consumers.

They set Maximum and Minimum Allowable Values (MAVs) for a range of different substances and characteristics that may be present in water. These include chemical, radiological and microbiological contaminants. A MAV of a microorganism or contaminant is its concentration in drinking water above which there is a significant risk of contracting a waterborne (enteric) disease.

The Standards apply to all drinking water supplies, except those serving a single domestic dwelling or household. They must be met at every point in a distribution system, from the point the water is treated to the furthest tap or outlet.

While the Standards establish limits on the composition of drinking water the Drinking Water Quality Assurance Rules (the Rules) tell suppliers what they need to do to comply with the Standards. The Rules include monitoring and reporting requirements along with other assurance actions. Taumata Arowai is also consulting on the Rules.

We developed the Standards with external technical input and review. They were reviewed by ESR (the Institute of Environmental Science and Research Limited) who ensured the MAVs align with guideline values set by the World Health Organisation (WHO).

WHO calculates their guideline MAVs for a 60kg adult. ESR recalculated the values for a 70kg adult, which is closer to the average body weight of adults in New Zealand. This results in small changes to some MAVs. ESR also considered whether MAVs were required for contaminants and factors that have never been detected in water in New Zealand.

We engaged the Cawthron Institute to review the MAVs for cyanotoxins as this is one of their areas of expertise. Following this initial development, the Standards were reviewed by sector reference groups established by Taumata Arowai. The reference groups included representatives from small water suppliers, Māori communities and local authorities. The Standards were then reviewed by the Ministry of Health.

The proposed changes to the MAVs are detailed below. Note the tables only reflect the proposed changes to the MAVs and do not provide the full list of determinands and associated MAVs.

Maximum acceptable values (MAV) for inorganic determinands of health significance

Name	Existing Standards MAV	Proposed Standards MAV	Remarks
Aluminium	No MAV listed	1 (mg/L)	WHO does not provide a guideline value (GV). The MAV is based on the WHO health-based value.
Barium	0.7 (mg/L)	1.5 (mg/L)	MAV is based on WHO GV of 1.3mg/L for 60kg adult but adjusted for a 70kg adult.
Boron	1.4 (mg/L)	2.4 (mg/L)	Adjusted to be the same as the revised WHO GV.
Molybdenum	0.07 (mg/L)	No MAV is proposed	Removed from MAVs as WHO does not provide a GV.
Nitrite, long term	0.2 (mg/L)	No MAV is proposed	WHO had a provisional MAV but have suspended this due to uncertainty about its accuracy.
Perchlorate	No MAV listed	0.08 (mg/L)	Based on WHO GV but adjusted for a 70kg adult.
Selenium	0.01 (mg/L)	0.04 (mg/L)	Now the same as the WHO GV.
Uranium	0.02 (mg/L)	0.03 (mg/L)	Now the same as the WHO GV.

Maximum acceptable values (MAV) for organic determinands of health significance

Name	Existing Standards MAV	Proposed Standards MAV	Remarks
Anatoxins - a	0.006 (mg/L)	MAV is proposed for Anatoxins as a group	Anatoxins now combined.

Name	Existing Standards MAV	Proposed Standards MAV	Remarks
Anatoxins – a(s)	0.001 (mg/L)	MAV is proposed for Anatoxins as a group	Anatoxins now combined.
Anatoxins	No MAV listed	0.006 (m/L)	Anatoxins now combined after advice from Cawthron Institute.
Atrazine	0.002 (mg/L)	0.1 (mg/L)	Based on WHO GV.
Azinphos methyl	0.004 (mg/L)	0.1 (mg/L)	No WHO GV. ESR determined the MAV in 2000 and has updated their advice on the level.
Cylindrospermopsins	0.001 (mg/L)	0.0008 (mg/L)	Adjusted on advice from Cawthron Institute.
Homoanatoxin-a	0.002 (mg/L)	No MAV is proposed	Removed on advice from Cawthron Institute.
Hydroxytriazine	No MAV listed	0.3 (mg/L)	Atrazine metabolite, based on WHO GV but adjusted for 70kg bodyweight.
MCPA	0.002 (mg/L)	0.8 (mg/L)	Based on WHO GV but adjusted for 70kg bodyweight.
Metalaxyl	0.1 (mg/L)	0.3 (mg/L)	No WHO GV. ESR determined the provisional MAV in 2000 and has updated their advice on the level.

Name	Existing Standards MAV	Proposed Standards MAV	Remarks
N-nitrosodimethylamine (NDMA)	No MAV listed	0.0001 (mg/L)	Based on WHO GV.
PFHxS + PFOS	No MAV listed	0.00007 (mg/L)	No WHO GV. MAV has been adopted from the Australian Drinking Water Guidelines.
PFOA	No MAV listed	0.00056 (mg/L)	No WHO GV. MAV has been adopted from the Australian Drinking Water Guidelines.
Sodium dichloroisocyanurate (as cyanuric acid)	No MAV listed	40 (mg/L)	Based on WHO GV.
Trichloroethene	0.02 (mg/L)	0.03 (mg/L)	Based on WHO GV but adjusted for 70 kg bodyweight.
1080	Long term MAV of 0.0035 (mg/L) retained	0.035 (mg/L) short term MAV	Short term MAV added.

Maximum Acceptable Values (MAV) for radiological determinands

Name	Existing Standards MAV	Proposed Standards MAV	Remarks
Total alpha activity	0.1 (Bq/L excluding radon)	0.5 (Bq/L excluding radon)	Adjusted to be the same as the revised WHO GV.
Total beta activity	0.5 (Bq/L excluding potassium-40)	1 (Bq/L excluding potassium-40)	Adjusted to be the same as the revised WHO GV.