**Notes relating to toxicant default guideline values (DGVs) in the toxicant DGV database**

The [DGV search tool](https://www.waterquality.gov.au/anz-guidelines/guideline-values/default/water-quality-toxicants/search) retrieves information from the toxicant default guideline value (DGV) database, which **includes** the following DGVs:

* *DGVs derived or revised since* [*ANZECC/ARMCANZ (2000)*](http://www.waterquality.gov.au/anz-guidelines/resources/previous-guidelines/anzecc-armcanz-2000) *(the 2000 Guidelines), once they have been approved following public consultation.*
  + - Where the revision of a published 2000 Guidelines DGV has been approved, the old DGV will be replaced with the revised DGV.
* *DGVs from the 2000 Guidelines that were derived using toxicity data for at least three species from at least three taxonomic groups.*
  + - This includes DGVs based on the species sensitivity distribution (SSD) approach and the assessment factor (AF) approach. The reliability of these DGVs has been re-classified based on the revised classification scheme in [Warne et al. (2018)](http://www.waterquality.gov.au/anz-guidelines/guideline-values/derive/warne-method-derive) and the DGV database has been updated accordingly.

**Note**: the revised reliability rating for each of the DGVs will be shown in a DGV search tool output report.

Separate to the DGV database, information on each of the 2000 Guidelines’ toxicants (for instance [chlorinated ethanes in fresh and marine water](http://www.waterquality.gov.au/anz-guidelines/guideline-values/default/water-quality-toxicants/toxicants/chlorinated-ethanes-2000)), have been extracted without change from section 8.3.7 of the 2000 Guidelines and published as [technical briefs](https://www.waterquality.gov.au/anz-guidelines/guideline-values/default/water-quality-toxicants/toxicants) on the ANZG (2018) website. Consequently, the original reliability rating of a toxicant’s DGV, as well as, in some instances, toxicant DGVs that are no longer recommended by the current ANZG (2018) guidelines for the reason that the data did not meet the minimum data requirements, are still provided.

Where information retrieved from the DGV database via the DGV search tool differs from the information extracted from the 2000 Guidelines, information retrieved from the DGV database should always be used in the first instance as it is the most current and accurate.

* *DGVs for organic compounds from the 2000 Guidelines that were derived using Quantitative Structure Activity Relationships (QSARs) (i.e. where actual toxicity data were absent or lacking).*
  + - These DGVs have been assigned an ‘unknown’ reliability rating in the DGV database.

The database **does not include** the following DGVs:

* *Guideline values from the 2000 Guidelines that were derived using toxicity data for fewer than three species or three taxonomic groups.*
  + - In the 2000 Guidelines, numerous *guideline values* were derived using toxicity data for fewer than three species from three taxonomic groups. The guideline values were derived using the assessment factor approach with very large safety factors, often of 1000, and were termed environmental concern levels or ECLs (see section 8.3.3.2 of the 2000 Guidelines). Given the extreme uncertainty surrounding these values, they should not be used as DGVs and, as such, they have not been included in the DGV database. The ECLs can, however, still be found in the 2000 Guidelines and in the information that has been extracted from section 8.3.7 of the 2000 Guidelines and published as [technical briefs](https://www.waterquality.gov.au/anz-guidelines/guideline-values/default/water-quality-toxicants/toxicants) on the ANZG (2018) website.
* *Guidelines values reported in the 2000 Guidelines for nitrate toxicity in freshwater, as they were erroneous. In the absence of an ANZG (2018) DGV, refer to the ‘Grading’ guideline values published in the report at* [*https://www.mfe.govt.nz/publications/fresh-water/updating-nitrate-toxicity-effects-freshwater-aquatic-species*](https://www.mfe.govt.nz/publications/fresh-water/updating-nitrate-toxicity-effects-freshwater-aquatic-species) *- which were used to inform the current New Zealand nitrate toxicity attribute.*

**References**

Australian and New Zealand Environment and Conservation Council/Agriculture and Resource Management Council of Australia and New Zealand (ANZECC/ARMCANZ) 2000. Australian and New Zealand guidelines for fresh and marine water quality. National Water Quality Management Strategy Paper No 4. Australian and New Zealand Environment and Conservation Council and Agriculture and Resource Management Council of Australia and New Zealand. Canberra, ACT.

ANZG 2018. Australian and New Zealand Guidelines for Fresh and Marine Water Quality. Australian and New Zealand Governments and Australian state and territory governments, Canberra, ACT, Australia. <https://www.waterquality.gov.au/anz-guidelines>.

Warne MStJ, Batley GE, van Dam RA, Chapman JC, Fox DR, Hickey CW & Stauber JL 2018. Revised Method for Deriving Australian and New Zealand Water Quality Guideline Values for Toxicants – update of 2015 version. Prepared for the revision of the Australian and New Zealand Guidelines for Fresh and Marine Water Quality. Australian and New Zealand Governments and Australian state and territory governments, Canberra, 48 pp.