Water Monitoring Information Portal Glossary & Metadata

This is a glossary of terms, abbreviations and metadata used on the Water Monitoring Information Portal.

For further information and explanation on some of these and other common terms and abbreviations, see the BoM's Glossary.

Glossary

Name	Acronym or symbol	Meaning
Australian Height Datum	AHD	The Australian Height Datum is generally equivalent to the elevation above median sea level. Please refer to the BoM Glossary for further details.
Adopted Middle Thread Distance	AMTD	Adopted Middle Thread Distance is the distance in kilometres, measured along the middle of a watercourse that a specific point in the watercourse is from the watercourse's mouth or junction with the main watercourse.
Bureau of Meteorology	BoM	Bureau of Meteorology is Australia's national weather, climate and water agency. For the latest information about stream and river heights for flood warning purposes, refer to the Australian Government's **Bureau of Meteorology website.**
Cumec	(m^3/sec)	A common unit of discharge or flow rate, '*cubic metres per second*', also expressed as m^3/sec.
Degrees Celsius	Deg. C or ^oC	A measure of temperature.
Discharge	(m^3/sec or ML/day)	Hydrology commonly relies on the measure of discharge, also known as a flow rate, which is expressed as a volume of water passing by a point within a particular timeframe, e.g., the discharge or flow rate at a Gauging Station may be 250 m^3/sec.
Department of Regional Development, Manufacturing and Water	DRDMW	The Queensland Department of Regional Development, Manufacturing and Water
Dissolved Oxygen	DO	A measure of oxygen (O_2) dissolved in water. The unit of measurement is milligrams per litre (mg/L).
Electrical Conductivity	EC	A measure of the ability of water to conduct an electrical current. This is a reflection of the amount of salt dissolved in water (i.e. salinity). EC is temperature dependent, departmenta data is temperature compensated unless it is specifically identified as such. The units are micro Siemens per centimetre (µS/cm).
Flow rate		See Discharge, Cumec and Megalitre.

Gauging Station	GS	Also known as a stream gauge, is a permanent device located at a given point along a stream channel, used to measure the rate and volume of water flowing past. Generally, water surface elevation (stage) and /or volumetric discharge (flow) are measured, and observations of biota and collection of water quality samples may also be made at some sites.
Groundwater Management Area	GMA	A Groundwater Management Area within, for example, the Pioneer Sub-artesian Area.
Hydrograph		A graph showing changes in stream discharge and/or height over a period of time.
Hydstra		A proprietary database the department uses for managing flow and water quality information. Please see the KISTERS website for further information.
Kilometre (km)		A measure of distance. 1 km equals 1000 metres.
Mean		The arithmetic mean or average of a dataset.
Median		The 'middle number' in a sorted list of numbers.
Megalitre (ML)		A common measure of water volume, 1 ML is equivalent to 1,000,000 litres. ML is generally used when defining the TOTAL water volume in a defined period (e.g. per day).
Metre	(m)	The basic unit of length adopted under the Systeme International d'Unites (SI or Metric System).
Micro Siemens per centimetre	(µS/cm)	EC measurement unit.
Millimetre	(mm)	A metric unit of length equal to one thousandth of a metre. Unit of rainfall measurement, one millimetre of accumulated rainfall is equivalent to one litre per square metre.
Nephelometric Turbidity Units	(NTU)	A measure of water turbidity (suspended solids in water).
Percentile	%ile	Please refer to the BoM Glossary.
pH	pH	The measure of hydrogen (H+) ion activity in a solution that is reported as the acidity or alkalinity of the water. A low pH (considered acidic pH 0-6) has a high concentration of hydrogen ions while a high pH (considered basic pH 8-14) has a low concentration of hydrogen ions. A pH value of 7 is considered neutral, being neither acidic nor basic.
Quality Code	QC	A schema used to code data in order to define a degree of confidence in quality of the water monitoring data. All monitoring data is required to have an associated quality code.
Square Kilometres	km^2	Also presented as sq. km, a unit of area, e.g,. land surface.
Time Series Data	TS	Time Series (TS) data is the continuous measurement of an environmental or control parameter repeated through time. The interval between successive measurements need not be fixed, while the most basic features of Time Series data are: Time (including the date)

		A single-dimensional value (e.g. a continuous water level measurement) Some Water Quality (WQ) parameters are captured as continuous Time Series data (e.g. EC, Temperature, pH and turbidity). Sensors concurrently record water quality parameters in the data logger along with water level data. This is often referred to as TSWQ.
Turbidity	NTU	Turbidity is the cloudiness or clarity of water and is often a measure of the amount of suspended particulate matter. The units are Nephelometric Turbidity Units (NTU).
Water Quality Sample Data		Water Quality sample data is discrete, non-continuous measurement of environmental parameters (e.g., EC, Temperature, Major Ions, Nutrients etc.). Generally, a bottled water sample which is analysed by a laboratory or measured directly/ *in-situ* with hand-held sensors. See Time Series Data for TSWQ definition.
Water Monitoring Information Portal	WMIP	This is a public web service with water datasets available for downloading that are the same datasets used for the department's water assessment and management purposes under the *Water Act 2000* such as for a Water Plan.
Water Plan	WP	A water plan approved as subordinate legislation under Division 3 of the *Water Act 2000* (Qld).

Metadata

Google Map Colour Indicators

When displayed on the map window, each Gauging Station locator pin/dot is coloured according to the current streamflow conditions relative to its long-term historic record.

Percentile Categories

Examples	Colour	Percentile	Based on the historic record, for this time of year it indicates that present discharge is:
	Green	> 80%	Very high
	Blue	51- 80%	Higher
	Orange	21- 50%	Lower
	Red	< 20%	Very Low
	Grey		No recent telemetry data is available

Gaps in data records

Gaps in data records are more to occur likely during extreme events, particularly for TSWQ stations, where the data is automatically audited and potentially erroneous data is prevented from being displayed (Unreported data).

Data validation

The department endeavours to validate data as quickly as possible. Our state-wide performance indicator aims for data to be validated within 80 days of field collection. You may request updated information to be periodically supplied with the current validated data. With respect to use of data, please note:

- Unvalidated data (Quality Code 130) has not been rigorously assessed and the data is quality coded to identify this. These datasets should be used with care as they may change after validation. These data should only be used by persons who are familiar with the characteristics of streamflow information.
- Validated data are data that has been assessed and is the best available quality at the time, however the data should always be interpreted taking into account the quality codes that have been applied.
- Hydrologic advice should be sought to assist with any interpretation.

Water monitoring sites

Please see the **Water Monitoring and Data** webpage for further information on the department's water quality and quantity monitoring networks. This includes access to the **Water Monitoring Information Portal**.

Current TS and water quality data Quality Codes

The Quality Codes the department currently uses are listed in the table below. These may be seen when viewing recent data.

Description	Print Quality Code	Quality Code	Height (m)	Flow	Rain (mm)	EC (µS/cm)	Temp (°C)	PH	DO (mg/L)
Verified data		10	✓	✓	✓	✓	✓	✓	✓
Water level below threshold (no flow)	B	15	✓	✓	✓	✓	✓	✓	✓
Verified 20		20	✓	✓	✓	✓	✓	✓	✓
Verified 30		30	✓	✓	✓	✓	✓	✓	✓
Noncompliance 40		40	✓	✓	✓	✓	✓	✓	✓
Theoretical calculation		50		✓					
Estimate	E	60	✓	✓					

No code value		130	✓	✓	✓	✓	✓	✓	✓

✓ applies to time series data type

Print Quality Code reflects the numerical Quality Code on pre-computed outputs

All current and historic data Quality Codes

The complete list of all current and historical Quality Codes are shown in the table below. Historical codes are indicated in italics and may be seen when viewing historical data, the department does not employ them in routine operations.

Description	Print Quality Code	Quality Code
Observed (Manually measured or field observation		1
Historical data code (CITEC data – normal reading)		9
Verified 10		10
No flow (Water level below threshold)	B	15
Verified 20		20
Good daily records (BoM data)		26
Verified 30		30
Gauging temp - Good		31
Gauging temp - Fair		32
Gauging temp - Poor		33
Gauging temp - Composite		34
Gauging temp - Suspect instrument		35
Gauging temp - Derived measurement		36
Gauging temp - Discharge correlated		37
Gauging temp - Data of no value		39

Description	Print Quality Code	Quality Code
Noncompliance		40
Theoretical calculation		50
Derived height (CITEC data)	*	59
Estimate	E	60
Derived discharge (CITEC data)	*	69
Back water affected (CITEC data)		79
Accumulated rainfall (BoM data)		80
Wet days within accumulated rainfall period		81
Validated rainfall		83
Gauge height > instrument threshold		119
Historic water quality data, Fair		125
Not coded (unvalidated data)	*	130
Surrogate		136
Interim value	I	140
Unknown quality	U	150
Unreported data	Blank value field	151 160 170 180 200 201 255

Descriptions in italics applies to historically used data Quality Codes

Print Quality Code reflects the numerical Quality Code on pre-computed outputs.

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