Australian Government
Commonwealth Environmental Water Holder

FLOW Monitoring Evaluation Research

We acknowledge the First Nations peoples as the Traditional Owners and Custodians of the lands, waterways and skies of the Murray-Darling Basin. We respect their continuing connection to culture and Country, and we thank them for their knowledge and science and the values reflected in these data.

Flow-MER Fish Larvae

Dataset name	Flow-MER Fish Larvae 2014-2023
Dataset citation	CEWH (2024) Fish Larvae. Flow-MER Program. Commonwealth Environmental Water Holder, Australian Government Department of Climate Change, Energy, the Environment and Water. Sourced from https://data.gov.au/data/dataset/flow-mer-fish-larvae on [date-sourced].
Description	Fish larvae counts from light traps and drift nets collected as part of the Commonwealth Environmental Water Holder (CEWH) Flow-MER program in the Murray-Darling Basin. Spawning of both native and introduced species was measured by collecting eggs and fish larvae using drift nets and light traps during the known spawning period at five Selected Areas (Edward/Kolety –Wakool River System, Goulburn River, Lachlan River System, Lower Murray River, Murrumbidgee River). Bongo tow nets, rather than drift nets, were used to sample pelagic fish in the Lower Murray River due to very slow flow velocities. The CEWH's Flow-MER program examines the contribution of Commonwealth environmental water to the environmental objectives of the Basin Plan 2012 (Basin Plan) and is assisting the CEWH to demonstrate environmental outcomes and adaptively manage the water holdings. Monitoring and evaluation is focused in seven Selected Areas: the Junction of the Warrego and Darling rivers, Gwydir river system, Lachlan river system, Murrumbidgee river system, Edward/Kolety-Wakool river system, Goulburn River and Lower Murray River. This Flow-MER data set includes and extends the long-term data collected at the same sites during the Long Term Intervention Monitoring (LTIM) project (2014-2019).
Currency	**Date from:** 1/7/2014
	Date to: 30/6/2023
Spatial domain	**Jurisdiction/Location:** Murray-Darling Basin
	Geographic extent: -24.586 138.568 152.489 -37.682
	Coordinate system: GDA1994, EPSG 4283
Dataset status	**Progress:** Ongoing
	Maintenance and update frequency: Annually within the life of the Flow-MER project

Attributes	Attribute Name	Description	Data Type
	Program	The name of the Flow-MER Selected Area in which the data were collected	text
	samplePoint	Name of the sampling site along a river within which the samples are located	text
	Description	Optional description of the SamplePoint	text
	Latitude	Decimal degrees	number
	Longitude	Decimal degrees	number
	sampleDate	Unique date-time stamp that is used to identify each data record.	dateTime
	sampleDateStart	Start date-time when the sampling device was set (to the nearest minute). When 'pooled' = 'Y', time	dateTime

		should be mean start/set time. Use 24 h time format.	
	sampleDateEnd	End date-time when the sampling device was retrieved (to the nearest minute). When 'pooled' = 'Y', time should be mean end/retrieve time. Use 24 h time format.	dateTime
	evaluationCode	E1 = data collection by category 1 or 2 standard method AND processed as required for Basin evaluation. E2 = data collection by category 1 or 2 standard method AND processed for using non-standard method for selected area evaluation E3 = data collection and processing using selected area specific methods (category 3)	category
	tripNumber	Identifier for a sampling trip to group samples across dates, within a flow delivery season, within a site, within a sampleType.	integer
	totalTripSamples	Number of samples of a specific sampleType taken within a trip, within a site.	integer
	sampleNo	Identifier for an individual sample, within a sampleType, within a trip, within a site.	integer
	pooled	Y/N Logical identifier indicating whether the sample is pooled	category
	speciesName	Latin name for species of fish If zero fish are recorded enter "No Fish"	category
	count	Number of individuals for speciesName collected in the sample	integer
	volumeFiltered	Number of cubic metres of water filtered through a DriftNet or Trawl sample (m^3)	integer
	qualityVolumeFiltered	1: Best quality unedited data. Meets operational standards and is considered a good representation of the true value. 2: Good quality. Minimal editing. May include sensor drift correction this is considered a good representation of the true value. 3: Modified or transformed data that is considered a reasonable representation of the true value. 4: Unreliable data - considered a poor representation (e.g. debris effecting sensor, flat batteries) 5: Estimated or modelled data.	integer
	sampleType	Sampling method	category
	turbidity	Turbidity of water at the time and site of sampling (NTU).	integer
	qualityTurbidity	1: Best quality unedited data. Meets operational standards and is considered a good representation of the true value. 2: Good quality. Minimal editing. May include sensor drift correction this is considered a good representation of the true value. 3: Modified or transformed data that is considered a reasonable representation of the true value. 4: Unreliable data - considered a poor representation (e.g. debris effecting sensor, flat batteries) 5: Estimated or modelled data.	integer
	comment	Optional comment to aid interpretation of an individual data row.	text

Data quality	**Lineage:** Exported from the MDMS 19/12/2023
	Positional accuracy: Locations accurate to 4 decimals but actual monitoring data collected at these locations can be up to 1km from the nominated point
	Attribute accuracy: Direct export from the MDMS without further processing
	Logical consistency: Sample point names are unique within the program
	Completeness: Complete export from the MDMS
Access and License	**Published Data Landing Page:** https://data.gov.au/data/dataset/5bc02db6-8c70-49a4-a3c1-9a5b1837844c
	Distribution format: CSV tabular data
	Access constraints: Creative Commons license CC BY-SA 4.0 Attribution-ShareAlike 4.0 International). https://creativecommons.org/licenses/by-sa/4.0/ Attribution — You must give appropriate credit, provide a link to the license, and indicate if changes were made. You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use. ShareAlike — If you remix, transform, or build upon the material, you must distribute your contributions under the same license as the original. redistribute the material in any medium or format must give appropriate credit, provide a link to the license, and indicate if changes were made. You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.
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Contributors	Flow-MER project – all Selected Area teams
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Custodian	Commonwealth Environmental Water Holder (CEWH), Department of Climate Change, Energy, the Environment and Water
Contact	Commonwealth Environmental Water Holder (CEWH) cewomonitoring@dcceew.gov.au
Maintainer	Flow-MER Basin scale project Shane Brooks (Flow-MER data manager) https://brooks.eco/contact
Metadata information	**Metadata date:** 4/10/2024