

Surface water scenario modelling

We build and calibrate different versions of our river system models to assess compliance with Murray-Darling Basin water planning and sharing regulations.

These model versions help us determine whether regulatory limits are being met, including:

- the Murray-Darling Basin Plan diversion cap
- baseline diversion limits (BDL)
- annual permitted take (APT)
- long-term average annual extraction limits (LTAAEL).

This table presents the status of existing models for NSW Murray Darling Basin water sharing plans. It lists the names of the model files of the current accredited or authorised model versions used for assessing compliance. Models with the file extension .sqj are created using IQQM modelling software; models with a file extension of .rsproj are built using Source software.

No model is currently available for the following unregulated river system water sharing plans:

- NSW Border Rivers Unregulated River Water Sources 2012
- Gwydir Unregulated River Water Sources 2012
- Namoi and Peel Unregulated Rivers Water Sources 2012
- Macquarie-Bogan Unregulated Rivers Water Sources 2012
- Lachlan Unregulated River Water Sources 2012
- NSW Border Rivers Unregulated River Water Sources 2012
- Intersecting Streams Unregulated River Water Sources 2011 (a model for this plan is under construction)
- Murray Unregulated River Water Sources 2011
- Lower Murray–Darling Unregulated River Water Source 2011.

Water sharing plan	Approved or accredited cap model	Current conditions	Accredited BDL model	Accredited APT model	LTAEL compliance and plan limit scenario models	Notes
Barwon-Darling Unregulated River Water Source 2012	LT92_30.sqq*	DarLAPT01_2Curr.sqq	BD_BDL_2021.sqq#	DarLAPT04.sqq#	LTAEL_2022.sqq	*Temporary approval lapsed and has not been renewed #Submitted for accreditation
Belubula Regulated River Water Sources 2012	No model	Input set WSP_inPractice	Belubula_4507552_WRP_001.rsproj (input set BDL)*	No model#	BELB_5.0.0_2022.rsproj (input set LTAEL)	*Provides inflow for Lachlan WRP BDL model candidate
Castlereagh Unregulated River Water Sources 2011	No model	CAST_MasterModel_v01.rsproj*	No model	No model	No model	*The existing model has not been used in compliance
Gwydir Regulated River Water Sources 2016	CAP_v27_11_2022.sqq*	VSC_v27_11_2022.sqq#	BDL_27_11_2022.sqq*	VSC_v27_11_2023.sqq*	CAP_v27_11_2022.sqq BDL_v27_11_2022.sqq	*Updated for the Healthy Floodplain Project #Reflects the floodplain licencing regime operational since 2022
Lachlan Regulated River Water Source 2016	LACHC71A.SYS* LACHCK022.sqq (with LACHC022.sqq - long term)#	LachAPT123_Current_2022_new.sqq	LachBD15.sqq#	LachAPT123_20220518.sqq@	LachBD15_WSP_2022.sqq	*Reviewed 2002 #Updated model in current use has not yet been externally reviewed @Submitted for accreditation
Macquarie-Cudgegong Regulated Rivers Water Source 2016	macqc013.sqq	CC_APT_20230322.sqq*	MACQ_BDL_20220908.sqq* macqBD46.sqq*	macqP110.sqq* CC_APT_20230322.sqq*	CC_APT_20230322.sqq* MACQ_BDL_20220908.sqq*	*Submitted for accreditation
Murrumbidgee Regulated River Water Source 2016	BIDGK111.iqq Rev.285		BIDGBDLA.iqq Rev. 243	BIDGPBPA.iqq Rev.326	BIDGP103.iqq Rev.285	

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Murrumbidgee Unregulated River Water Sources 2012	No model	Upper_Murrumbidgee_Stitch_5_12_0_V18c.rsproj*	No model	No model	No model	*The existing model has not been used in compliance
NSW Border Rivers Regulated River Water Source 2021	IQQM model	BorderRivers_2020_09_02.rsproj	BorderRivers_2020_09_02.rsproj	BorderRivers_2020_09_02.rsproj	BorderRivers_2020_09_02.rsproj	
NSW Murray and Lower Darling Regulated Rivers Water Sources 2016	The accredited Source Murray Model is held by the MDBA	Source version 5.20.0; Commit: da9d186; input set BDL.WRP.Current	SMM run 9600	SMM run 9601	Source version 5.20.0; Commit: da9d186; input set BDL.LTAAEL	
Peel Regulated River Water Source 2022	B120	No model	A122	E114	E114	
Upper Namoi and Lower Namoi Regulated River Water Sources 2016	B195	NAMO_CAL_274_5.20.0.12549.rsproj	B514	D096	NAMO_CAL_274_5.20.0.12549.rsproj	