GOYDER INSTITUTE FOR WATER RESEARCH MODEL METADATA TEMPLATE

METADATA REQUIRED	DETAILS
Model Name and version	Hydro-ecological conceptual models of ecological response to flow in the South Australian Murray-Darling Basin (SA MDB).
Date of lodgement of Metadata. Name of Metadata Provider	February 2 2015 Chris Bice, chris.bice@sa.gov.au
Goyder Institute Project Number and Name	**GOYDER INSTITUTE FOR WATER RESEARCH** Project No. E.1.7 An assessment of the research requirements to support effective provision of environmental water allocation in the South Australian Murray-Darling Basin: Part 2 – Development of hydro-ecological conceptual models and identification of knowledge gaps in current understanding of flow–biota relationships
Project Team	Project Leader Dr Kane Aldridge, kane.adlridge@adelaide.edu.au Part 2 Task Leader Brenton Zampatti, Brenton.zampatti@sa.gov.au Project team members Chris Bice, chris.bice@sa.gov.au Jason Nicol, Jason.nicol@sa.gov.au Daniel Rogers, daniel.rogers@sa.gov.au Rebecca Turner, Rebecca.turner@sa.gov.au Sally Maxwell, sally.maxwell@sa.gov.au Nadine Kilsby, nadine.kilsby@sa.gov.au Todd Wallace, todd.wallace@adelaide.edu.au Deborah Furst, Deborah.furst@adelaide.edu.au Rod Oliver, rod.oliver@csiro.au
Creator/Developer	Above project team.
Owner/Contact Person and contact details	Chris Bice and Brenton Zampatti, Inland Waters and Catchment Ecology Program, SARDI Aquatic Sciences (2 Hamra Avenue, West Beach, 5024) Chris.bice@sa.gov.au Brenton.zampatti@sa.gov.au ***** SEE IP PERMISSION SECTION FOR ANY SPECIFIC REQUIREMENTS *****
Model Location	*Where is the model archived?* The model is stored at the University of Adelaide on the Staff Shared Drive (S) (file path: S:\Science\BiologicalSciences\Ecol_and_Env_Sci\Brookes\GOYDER\River Murray Research Requirements) and managed by the limnology group. The leader of this group is Justin Brookes (justin.brookes@adelaide.edu.au, 08 83133747). *Is there a version of the model in active further development? Where is this active version located?* No, although models could be updated in the future.

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IP or other permission requirements	********* **REFER TO GOYDER INSTITUTE FOR WATER RESEARCH AGREEMENT** ******* *Are there any IP issues associated with the model and/or the dependencies that future users need to be aware of?* No
Licences associated with model and/or dependencies	********* **REFER TO GOYDER INSTITUTE FOR WATER RESEARCH AGREEMENT** ******* *Are there any licenses associated with the model and/or the dependencies that future users need to be aware of?* No
Confidentiality agreements associated with model and/or dependencies	*Are there any confidentiality agreements associated with the model and/or the dependencies that future users need to be aware of?* No
Brief outline of model	The models take the form of predictive statements of ecological response of a range of ecosystem components (1 – nutrients, carbon, biofilms and microbes, 2 – microbiota, 3 – vegetation, 4 – macroinvertebrates, 5 – frogs, 6 – fish and 7 – birds) to a series of different flow scenarios in the SA Murray Darling Basin. Predictive statements of expected patterns and processes (i.e. ecological response) are based upon data on environmental conditions experienced under each flow scenario and knowledge of ecosystem component ecology/biology (both published and expert opinion). Predictive statements are assigned a certainty score in relation to the amount of data/literature to support the statement.
Area/region covered	The South Australian Murray-Darling Basin (SA MDB)
Platform and language and version	The models represent qualitative summaries of predictive statement and involve no computational components. Summary diagrams of conceptual models were created in CorelDRAW X6.
Dependencies upon: i) other models and/or platforms (including version) and location ii) essential data and data sources and location	Not applicable

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How was model used	The models represent a repository of knowledge and summary of flow–biota relationships in the SA MDB and will directly inform environmental water allocation. Furthermore, the models identified key knowledge gaps in contemporary ecological understanding to be the subject of future research. ○ *Parameterisation/Validation (if applicable; provide a brief summary and include time period of calibration/simulation)* Not applicable. ○ *Scenarios and outputs from various runs (provide a brief summary and indicate where these are stored)* Summarised in Goyder Institute Technical Report 14/18 ○ *Assumptions behind model (provide a brief summary and indicate where these are stored)* Summarised in Goyder Institute Technical Report 14/18 ○ *Limitations of model(provide a brief summary)* Summarised in Goyder Institute Technical Report 14/18 ○ *Peer review process (if applicable)* Reviewed by two external reviewers ○ *Extensibility of model (can it be run for different time periods)* The models could be extended to include further scenarios or incorporate new knowledge. Goyder Institute Technical Reports are available at http://goyderinstitute.org/
Specificity of data	*Was data sourced from local field sites or literature* Hydrological and environmental data was sourced from DEWNR and the Murray Darling Basin Association. Velocity data, as well as biotic data (i.e. abundance, distribution, animal life-history, etc.) and ecological understanding to underpin the conceptual models were sourced from the literature. Sources are detailed in Goyder Institute Technical Report 14/18 Available at http://goyderinstitute.org/
Datasets/data products produced	*Include details of where datasets/products are located and contact details in the storage location* No datasets were produced but 'products' are summarised in Goyder Institute Technical Report 14/18 Available at http://goyderinstitute.org/

METADATA REQUIRED	DETAILS
Other Information	
Publications (papers and technical reports)	Please follow the format: Goyder Institute for Water Research Technical Reports: Bice, C.M., Zampatti, B.P., Aldridge, K.A., Furst, D., Kilsby, N., Maxwell, S., Nicol, J., Oliver, R., Rogers, D., Turner, R. and Wallace, T. 2014, *An assessment of the knowledge requirements to support effective provisions of environmental water in the South Australian Murray-Darling Basin. Part 2 - Development of hydro-ecological conceptual models and identification of knowledge gaps in current understanding of flow–biota relationships,* Goyder Institute for Water Research Technical Report Series No. 14/18, Adelaide, South Australia.
Collaborations and acknowledgements	DEWNR Coorong, Lower Lakes and Murray Mouth Program DEWNR Science, Knowledge and Management staff
Keywords	Environmental water, River Murray, conceptual model, ecology

(Include partner logos as appropriate to recognise all Project collaborators)