

Basin Plan Fish Monitoring Summary (2014/15 – 2023/24): Water Resource Planning Area Reports

Hayden Schilling & David Crook

March 2025



Table of Contents

Chapter 1 Introduction and Preface	3
Chapter 2 Barwon-Darling Watercourse Water Resource Planning Area	5
Chapter 3 Gwydir Water Resource Planning Area	65
Chapter 4 Intersecting Streams Water Resource Planning Area	132
Chapter 5 Lachlan Water Resource Planning Area.....	177
Chapter 6 Macquarie-Castlereagh Water Resource Planning Area.....	239
Chapter 7 Murrumbidgee Water Resource Planning Area.....	301
Chapter 8 Namoi Water Resource Planning Area.....	366
Chapter 9 NSW Border Rivers Water Resource Planning Area	432
Chapter 10 NSW Lower Darling (Baaka) Water Resource Planning Area.....	500
Chapter 11 NSW Murray Water Resource Planning Area	561

Citation Details

Schilling, H., Crook, D. 2025. Basin Plan Fish Monitoring Summary (2014/15 – 2023/24): Water Resource Planning Area Reports. NSW Department of Primary Industries and Regional Development. Port Stephens Fisheries Institute. 625pp. (PUB25/277)

Cover image credit: NSW DPIRD FER Staff; Fish images credit: Gunther Schmida

Acknowledgements

This work is funded by the NSW Department of Primary Industries and Regional Development and the Commonwealth Government under the *Federation Funding Agreement – Environment on Implementing Water Reform in the Murray-Darling Basin*. The dataset used in the temporal analysis was generated by NSW DPIRD Fisheries from 1994–2024 and sourced from multiple internally and externally funded projects. The authors acknowledge past and present DPIRD Fisheries scientists, technicians and managers who contributed to its collection, as well as the ongoing support of external collaborators and funding agencies (in particular, the Murray–Darling Basin Authority, the Commonwealth Environmental Water Office, and the NSW Freshwater Recreational Fishing Trust). Thank you to Camila Leite Martins for assistance with formatting the reports. We continue to be thankful for the ongoing site access granted by private landholders across NSW and acknowledge that we work on Country which always was and always will be Aboriginal land. The fish surveys that generated the data used in our analyses were conducted under permits approved by the NSW Fisheries Animal Care and Ethics Committee.

Chapter 1 Introduction and Preface

This report spans 2014/15 – 2023/24 and expands upon the previous reports of [Schilling & Crook \(2023\)](#) and [Schilling & Crook \(2024\)](#). This updated report was produced as part of the [revised BPEOM-Fish program](#) but also includes relevant data from a range of projects. Each chapter reports on a different New South Wales (NSW) Water Resource Planning Area (WRPA; Figure 1.1). The New South Wales Lower Darling and Murray WRPA was split into two regions for more spatially explicit reporting.

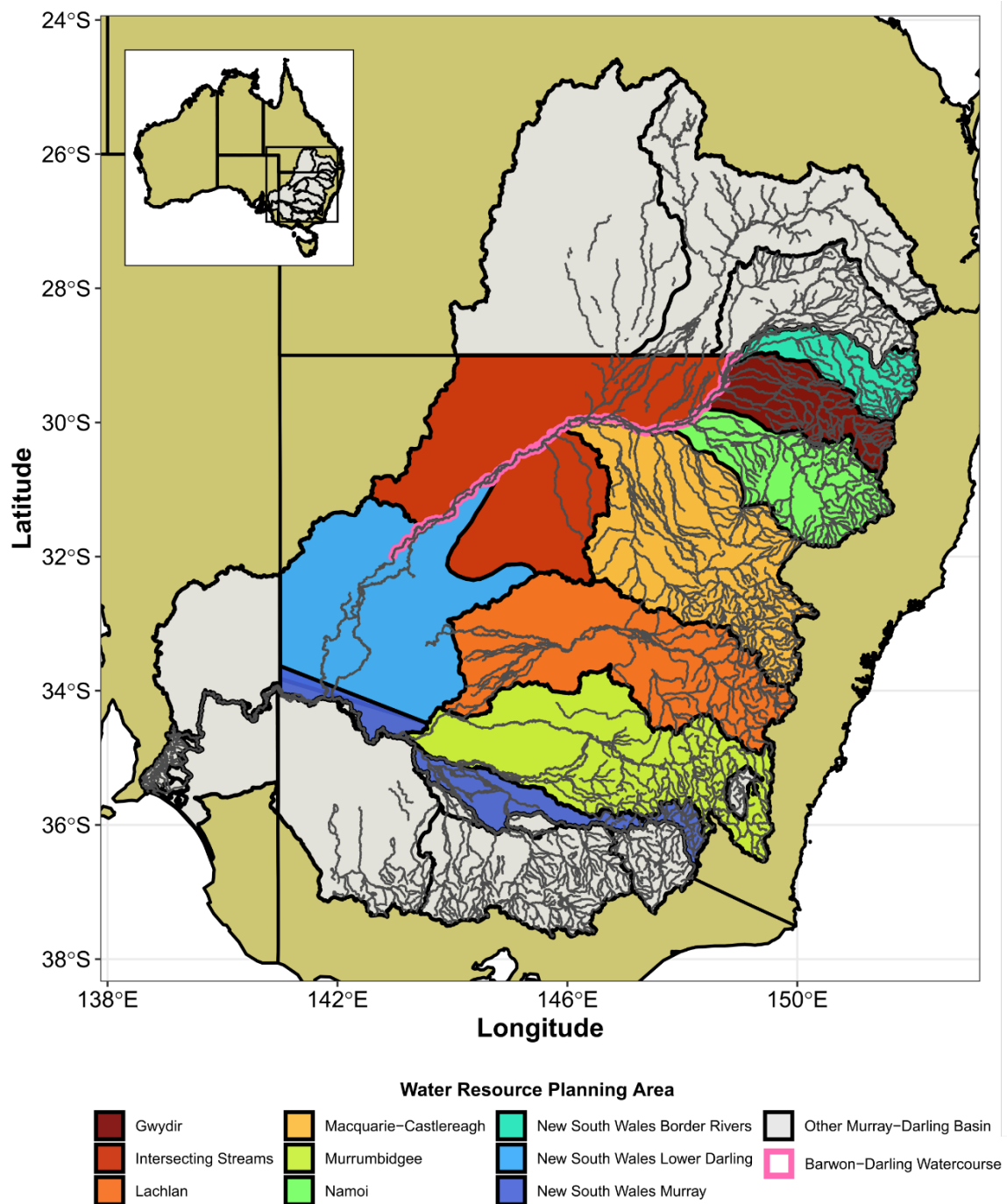


Figure 1.1: Map showing the Water Resource Planning Areas (WRPAs) contained within this report. WRPAs outside of NSW are not reported in this document. Note the New South Wales Murray and Lower Darling WRPA has been split into two separate areas for this report.

The purpose of this report is to provide succinct summaries of key information at the WRPA scale to support river and fishery management. Ultimately this information aims to inform and contribute to the Basin-wide Environmental Water Strategy. Each chapter (Chapters 2 – 11) is designed as a stand-alone report that can be viewed in isolation and, as such, there is repetition among the chapters. Each chapter is also formatted identically to aid readers in locating information.

A particular focus is given to the following six species:

- Murray cod
- Golden perch
- Freshwater catfish
- Bony herring
- Australian smelt
- Common carp

These species were specifically reported against for a variety of reasons which differed among species but included:

- They have distributions covering large portions of the NSW Murray-Darling Basin;
- Some are key species for recreational fisheries;
- Some are key components of aquatic food chains that support ecosystem function;
- Carp is the most dominant invasive fish species across the NSW MDB.

Major changes in this report compared to the previous report (Schilling & Crook 2024) are:

- The inclusion of data from 2023/24, extending the previous timeseries by 1 year;
- The analyses of abundance and biomass have been altered to provide annual estimates;
- Maps have been improved to increase readability and clarity.

References

Schilling, H., Crook, D. 2023. Basin Plan Environmental Outcomes Monitoring for Fish (2014/15 – 2019/20): Water Resource Planning Area Reports. NSW Department of Primary Industries. Fisheries NSW, Port Stephens Fisheries Institute. 517pp. (PUB23/369)

Schilling, H., Crook, D. 2024. Basin Plan Fish Monitoring Summary (2014/15 – 2022/23): Water Resource Planning Area Reports. NSW Department of Primary Industries Fisheries, Port Stephens Fisheries Institute. 572pp. (PUB25/277)