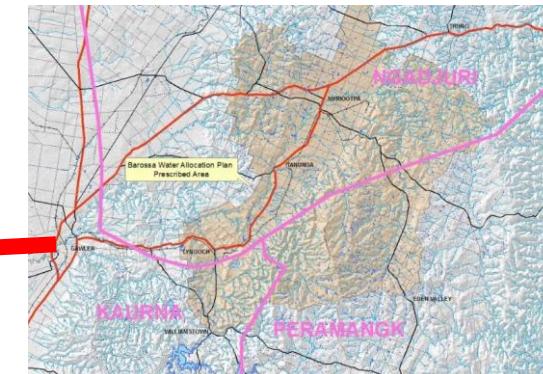
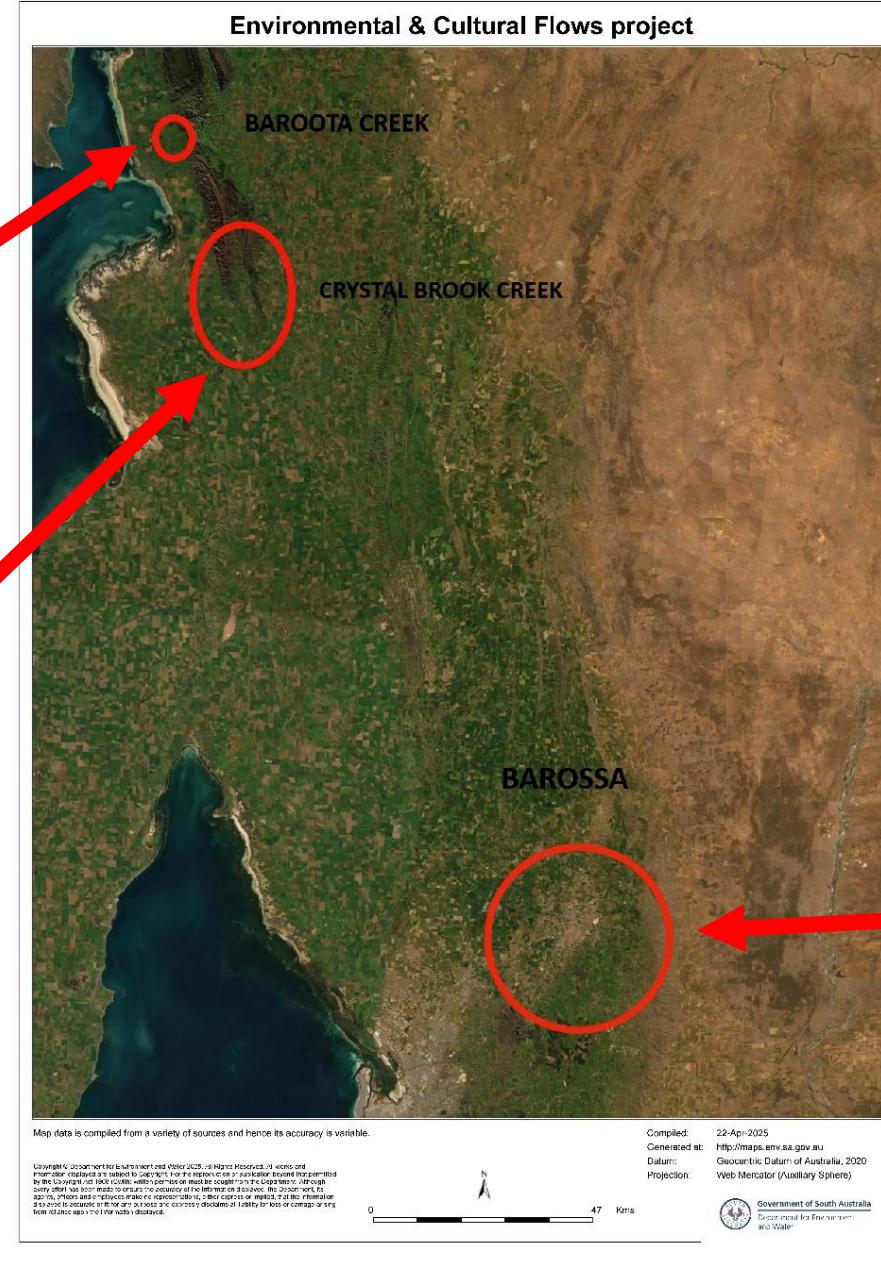
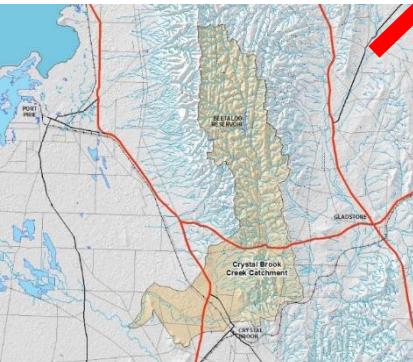


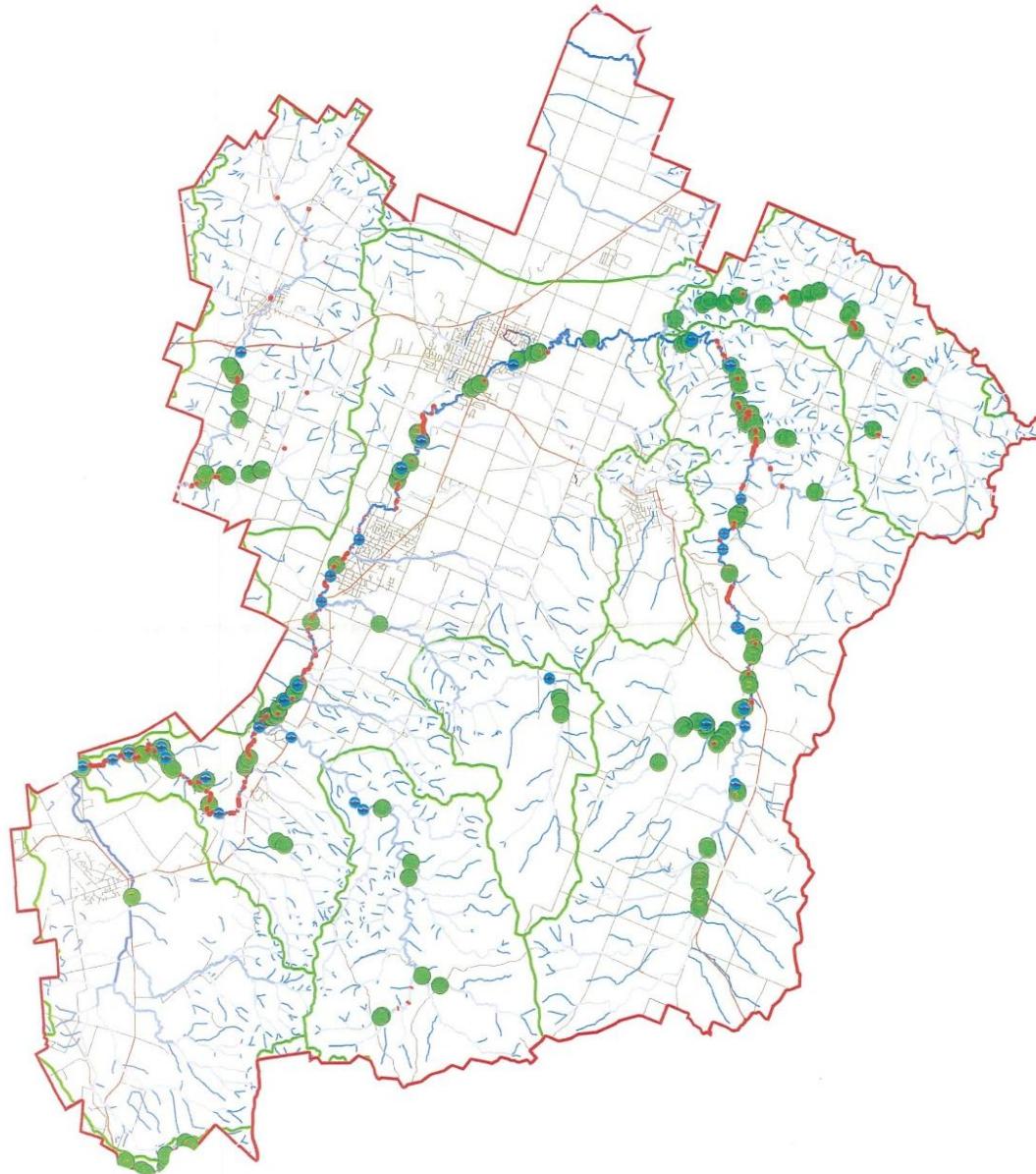
Environmental & Cultural Flows project

Jennifer Munro – Northern & Yorke Landscape Board



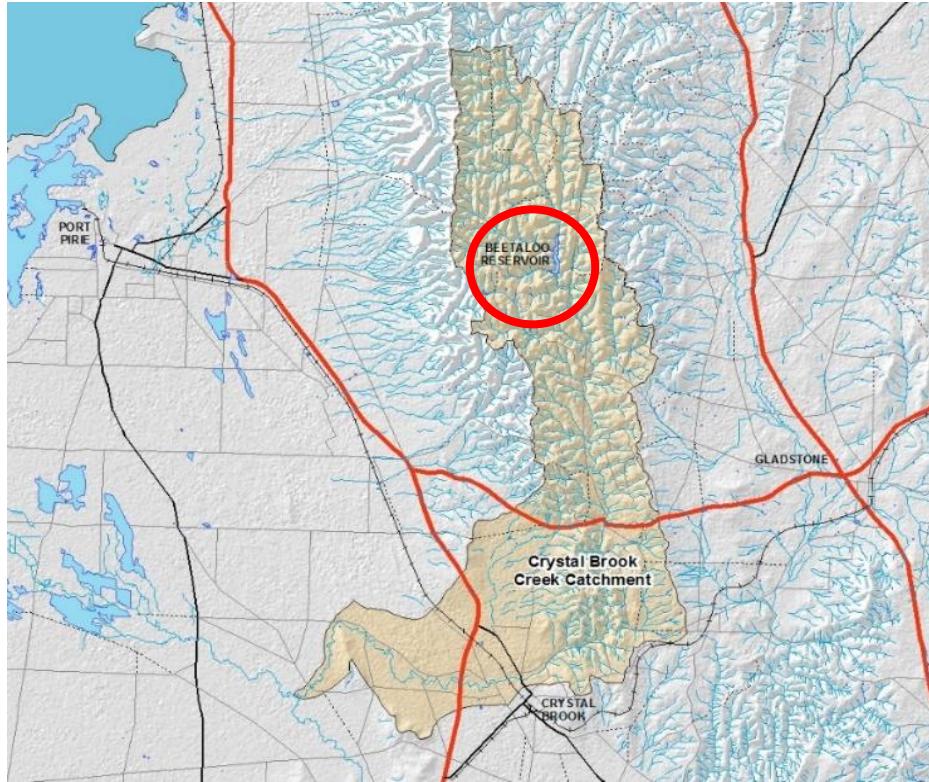
Project area





Barossa permanent pools

Baroota & Crystal Brook Creeks & Reservoirs

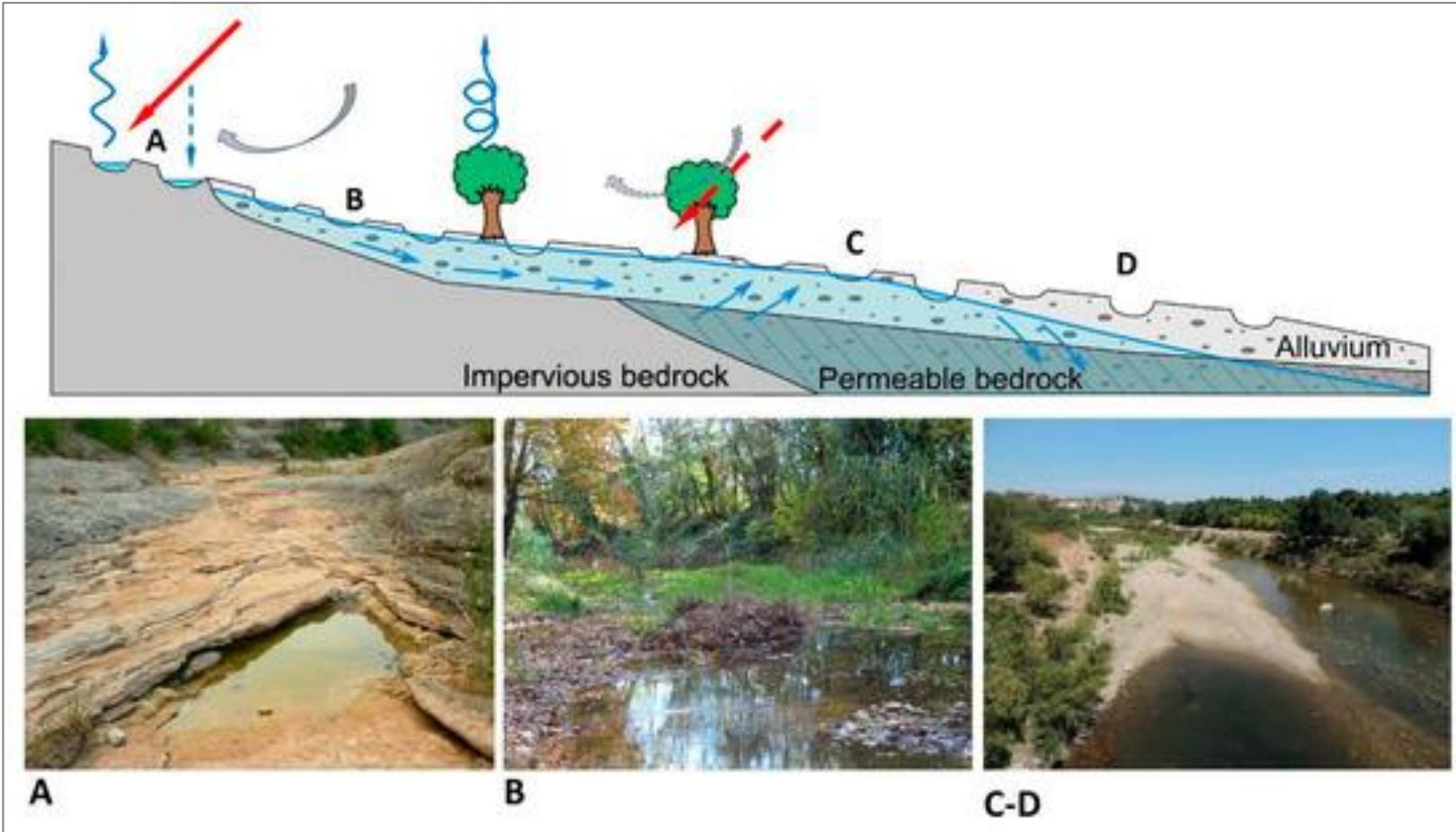


Thanks to SA Water

Project Outcomes

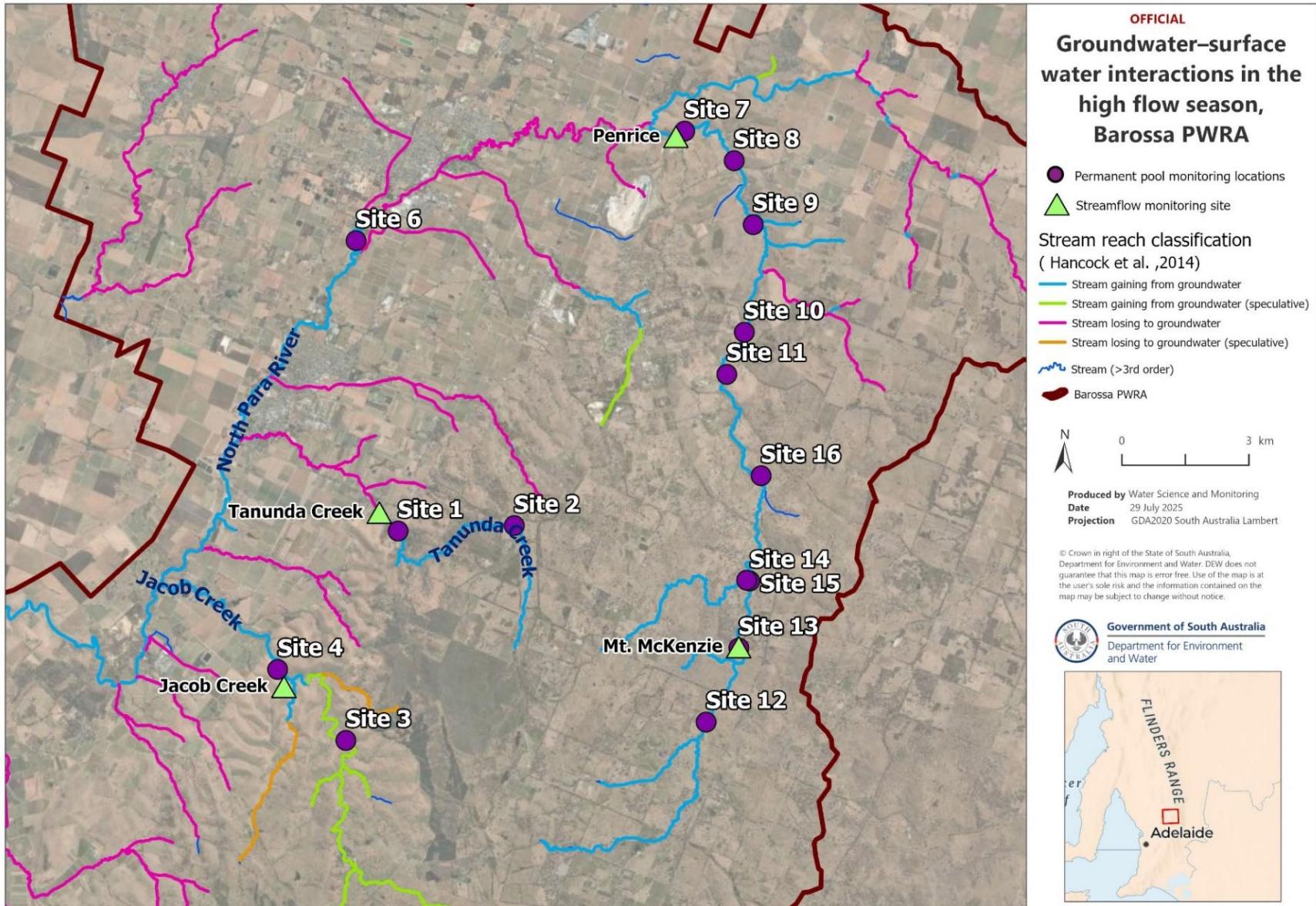
1. Identification of the **current riparian health** of each catchment determined through **monitoring activities** - **achieved**
2. Identification of the **flow characteristics** (e.g. volume, season) needed to meet **environmental requirements and cultural obligations** in all three catchments - **achieved**
3. Development and implementation of **environmental water release programs** to address **riparian health and cultural values** – **achieved in 2/3**
4. Delivery of **increased flows** in all three catchments to improve **riparian health and cultural values** – **achieved in 2/3**

Barossa permanent pools



Schematic of isolated pools and their relationships with groundwater.

- (A): "perched" pools.
- (B): "through-flow" pools.
- (C): "groundwater gaining" pools.
- (D) "groundwater losing" pools.

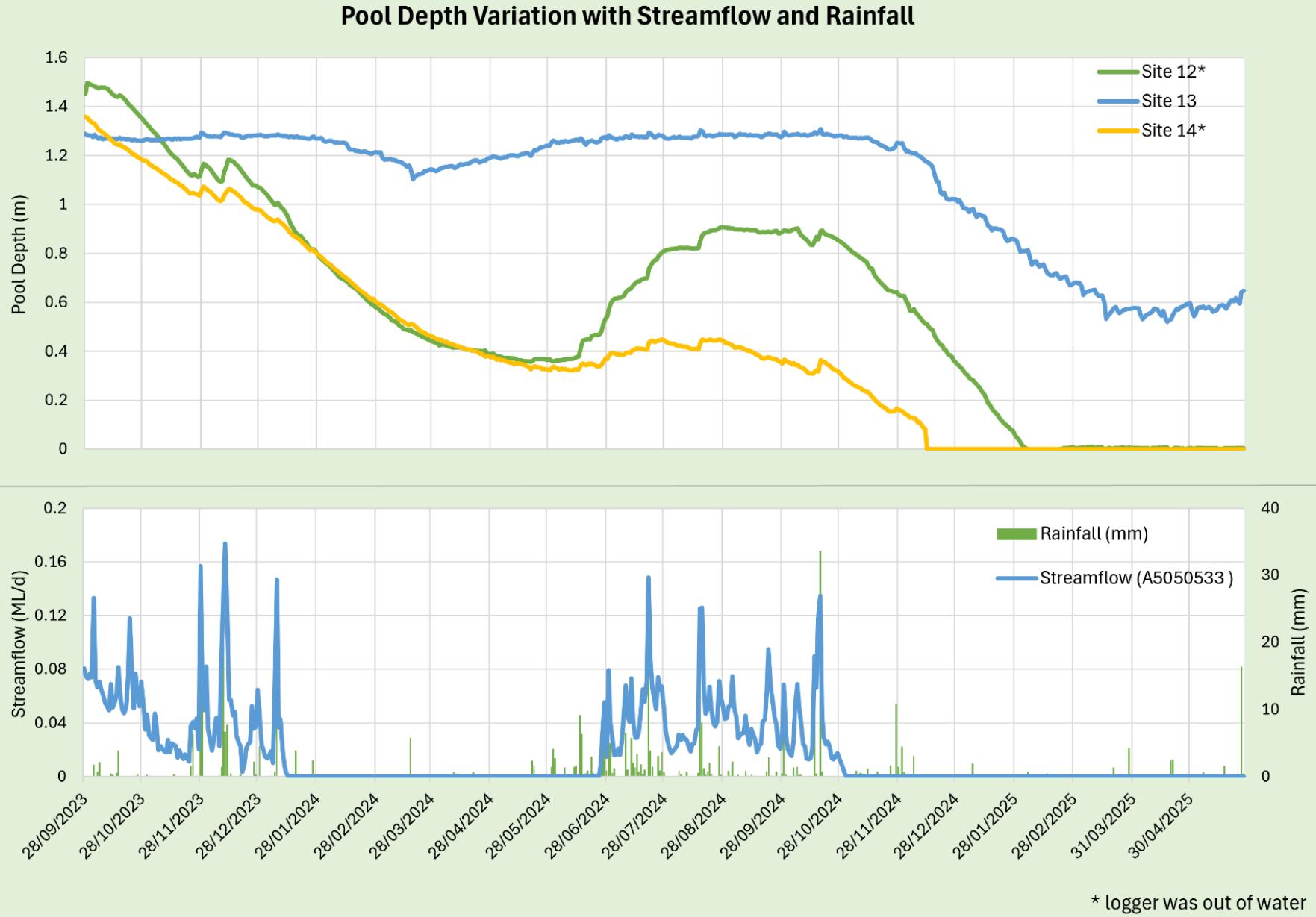


Barossa permanent pools – flow loggers

Thanks to all landholders & Dept. for Environment and Water

Barossa permanent pools – flow loggers

Variation in pool depth at Site 12, 13 and 14 in Upper Flaxman Valley



Rainfall at Collingrove (23302)

Streamflow at Mt.Mckenzie (A5050533)

Barossa fish surveys – Nature Glenelg Trust



Water releases – Baroota & Beetaloo Reservoirs



Thanks to all landholders

- Co-ordinated with SA Water
- Support the health and resilience of river red gum trees
- Support First Nations flow objectives
- August – September 2024
- **Baroota Reservoir (6,140ML)**
 - ~600ML flow ~5km over 12 days
 - Reservoir capacity used ~10 %
- **Beetaloo Reservoir (3,180ML)**
 - ~700 ML flow ~20km over 48 days
 - Reservoir capacity used ~25 %

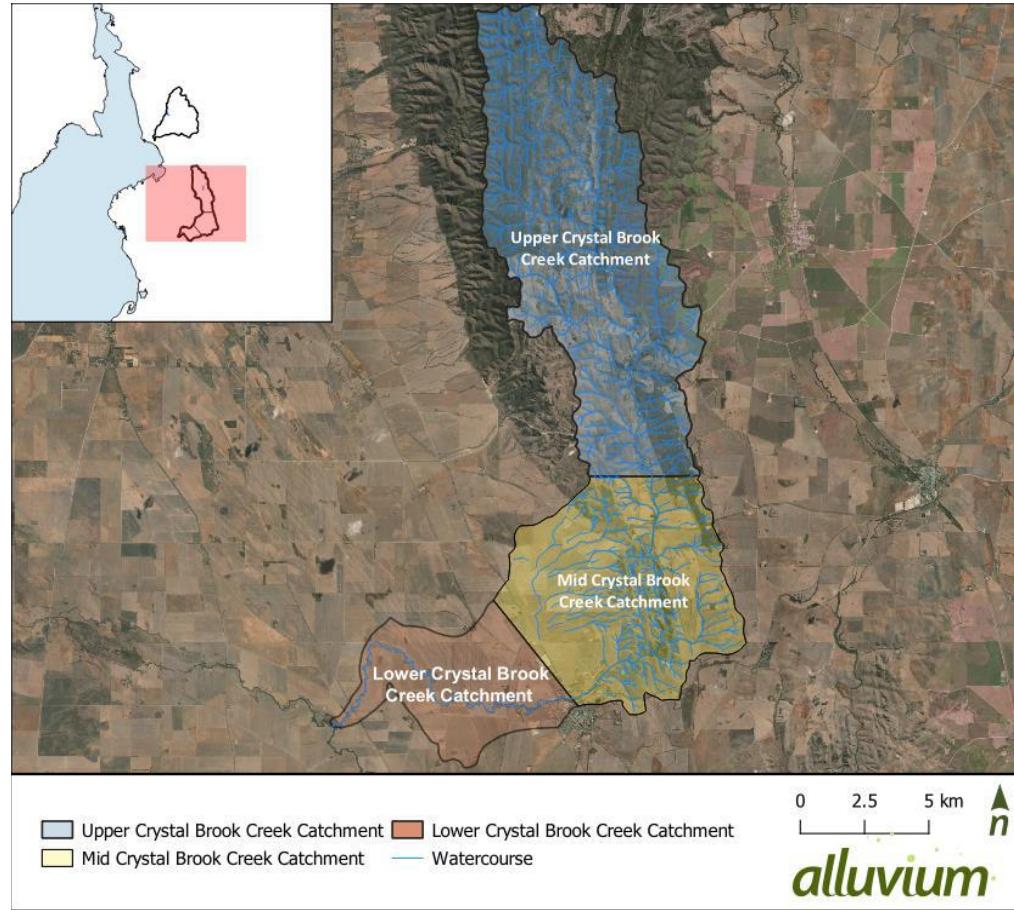
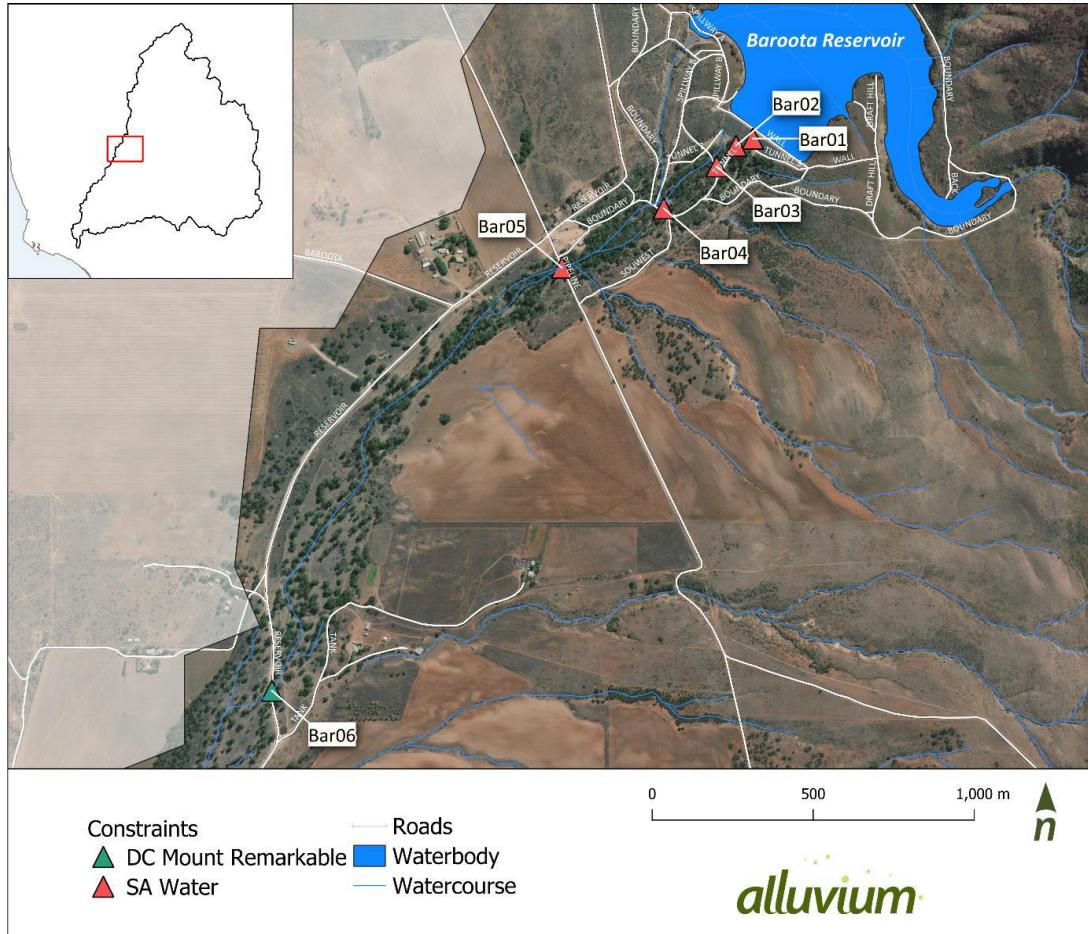
Water release 2024 – Baroota Reservoir to Baroota Creek



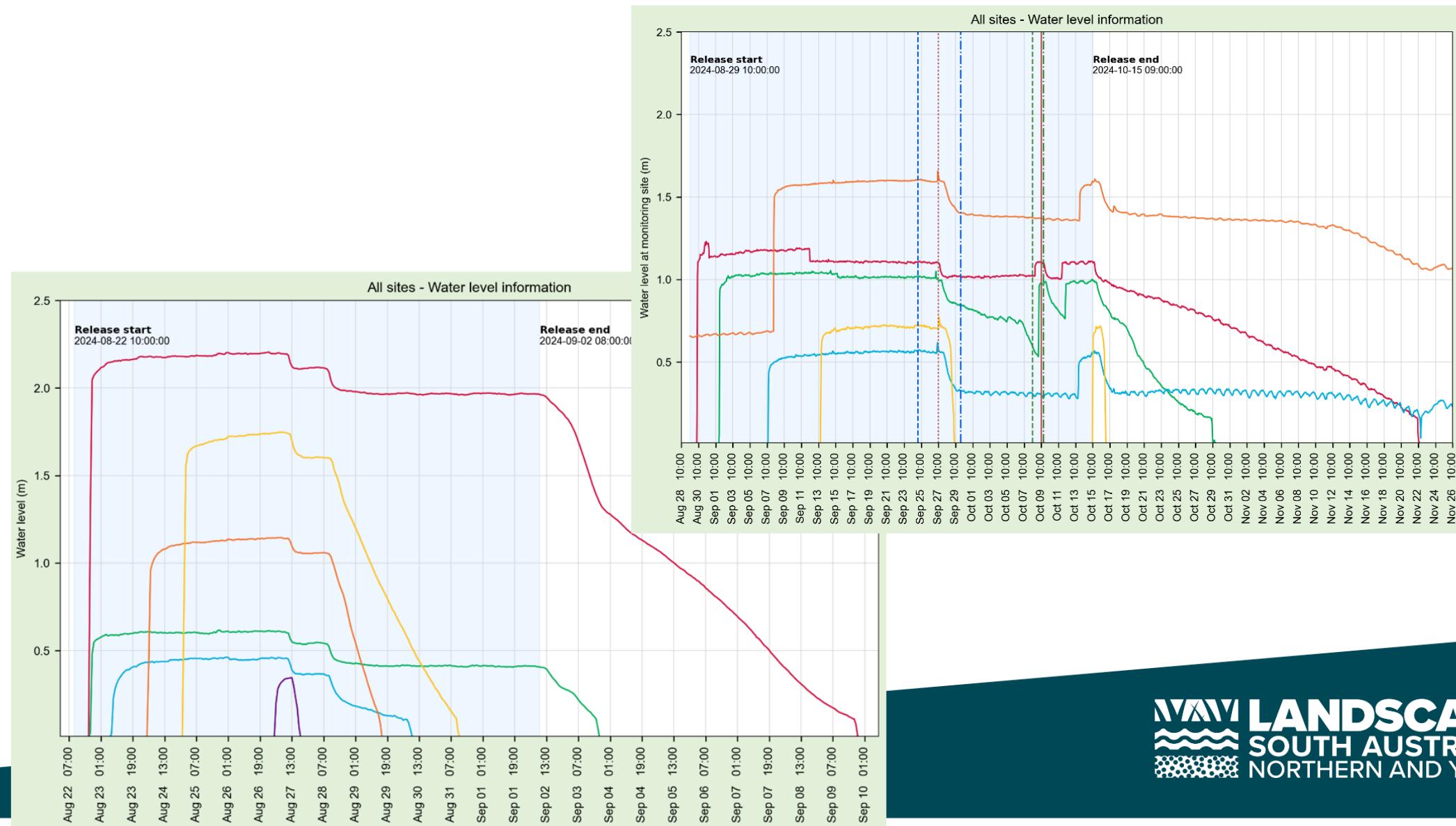
Water release 2024 – Beetaloo Reservoir to Crystal Brook Creek



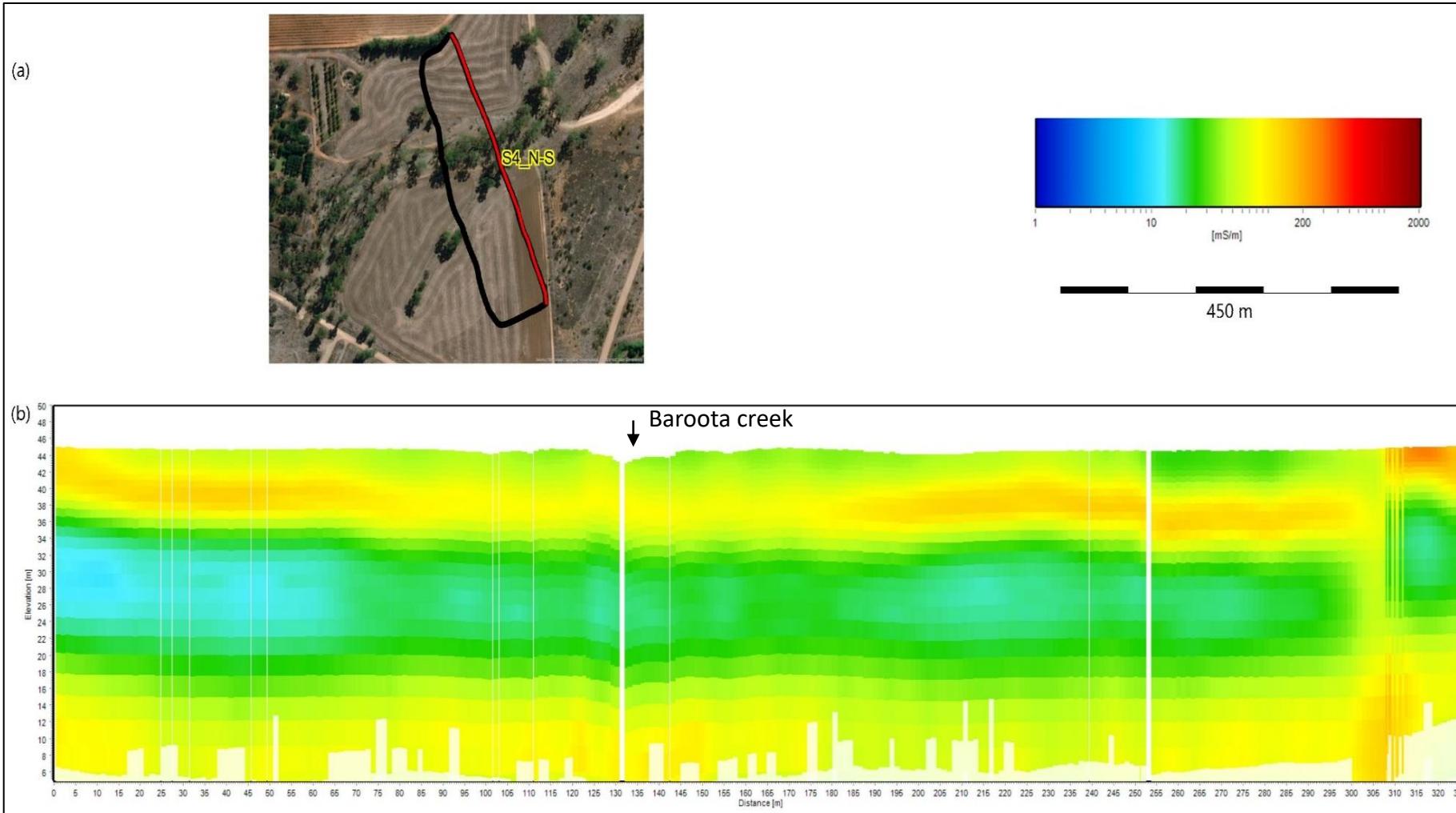
Barriers to flow study – Alluvium Consulting



Flow loggers – Dept. for Environment and Water



Groundwater science – thanks to Flinders University



Tree Condition surveys – thanks to Dr Todd Wallace



2023



2024

First Nations collaboration – thanks to Nukunu

Cultural objectives:

- Return of natural flow regime
- On Country gatherings

Water releases 2024 attended by:

- Nukunu First Nations people
- SA Native Title representatives
- Aboriginal Way journalist
 - News story & podcast
- Reckless Eye Productions
 - Production of cultural water video with Nukunu



First Nations collaboration – thanks to Nukunu



- Tree Condition Index methodology training of Nukunu Elders and members in 2023 & 2024

Project partners & funding

- Nukunu First Nations People
- Landholders
- SA Water
- Flinders University
- Riverwater Life consultancy
- Alluvium Consulting
- Nature Glenelg Trust
- Department for Environment and Water



Government of South Australia
Department for Environment
and Water

**Funded by the Landscape Priorities Fund from the
Government of South Australia**



Next steps.....?

