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Weir going to build a wall

Luke K. Pearce

NSW Department of Primary Industries

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Department of
Primary Industries

Weir Going to Build a Wall

Utilising Barriers to Fish Passage to Protect Endangered Species

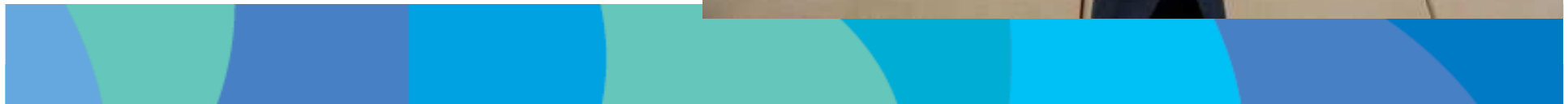


Luke Pearce Fisheries Manager NSW Department of Primary Industries

Provide three recent examples where fish passage barriers have been used to Protect Endangered Species

- Blanke Creek
- Retreat River
- Coppabella Creek

- Fish Passage in small streams Yes No????



Citizens We Are Protecting



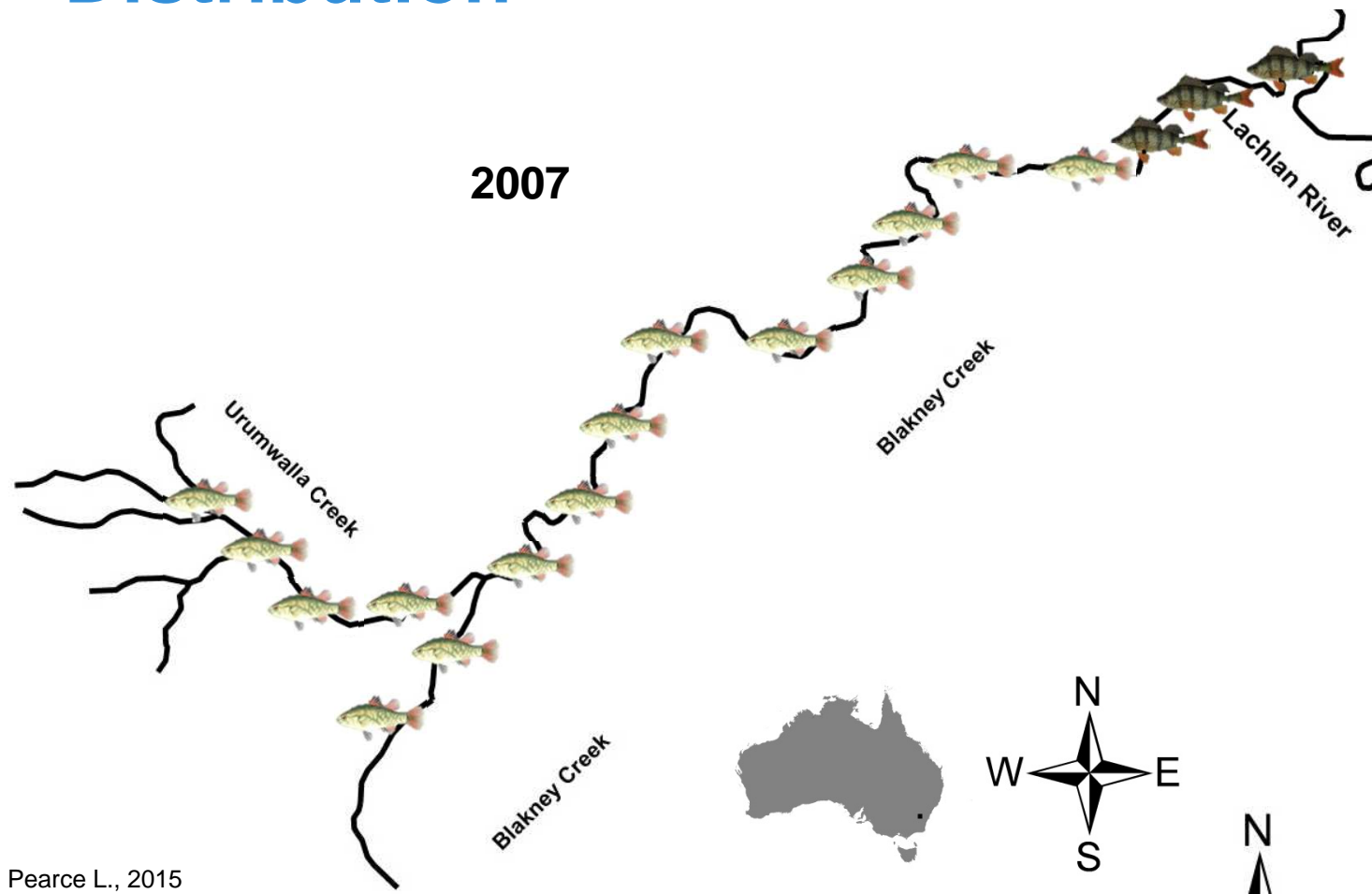
The Mexican Invaders



Blakney Creek

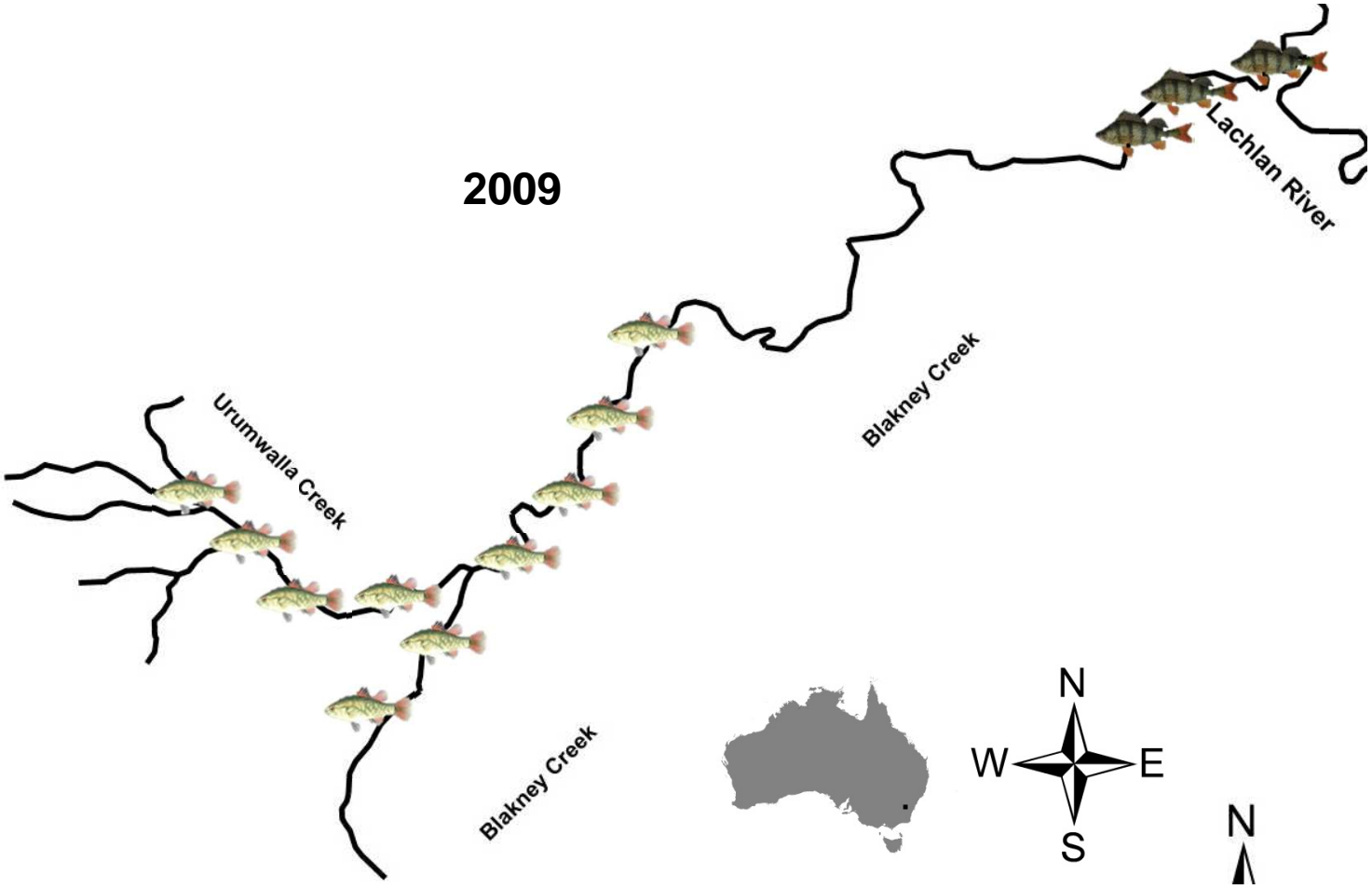


Distribution

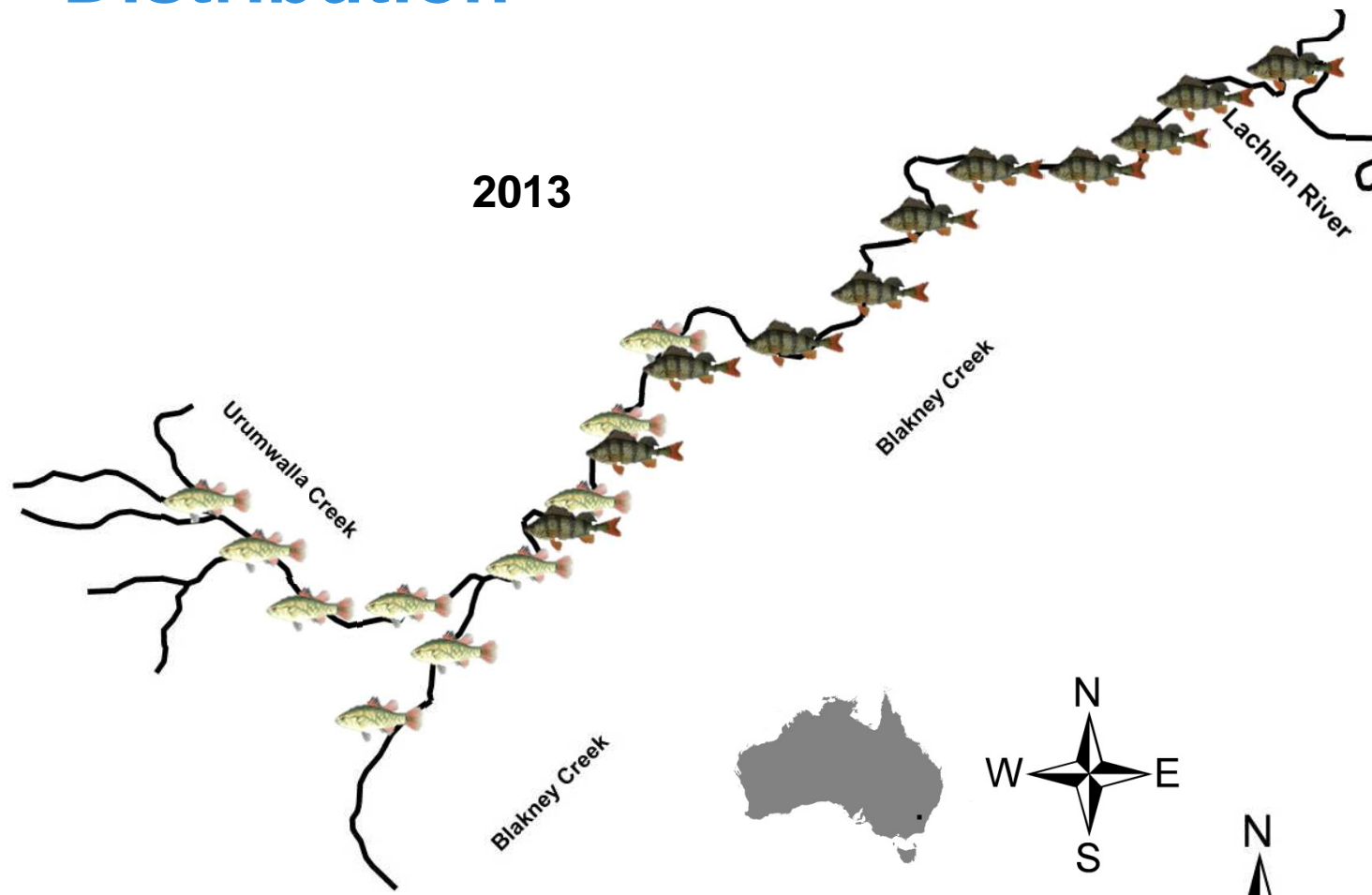


Pearce L., 2015

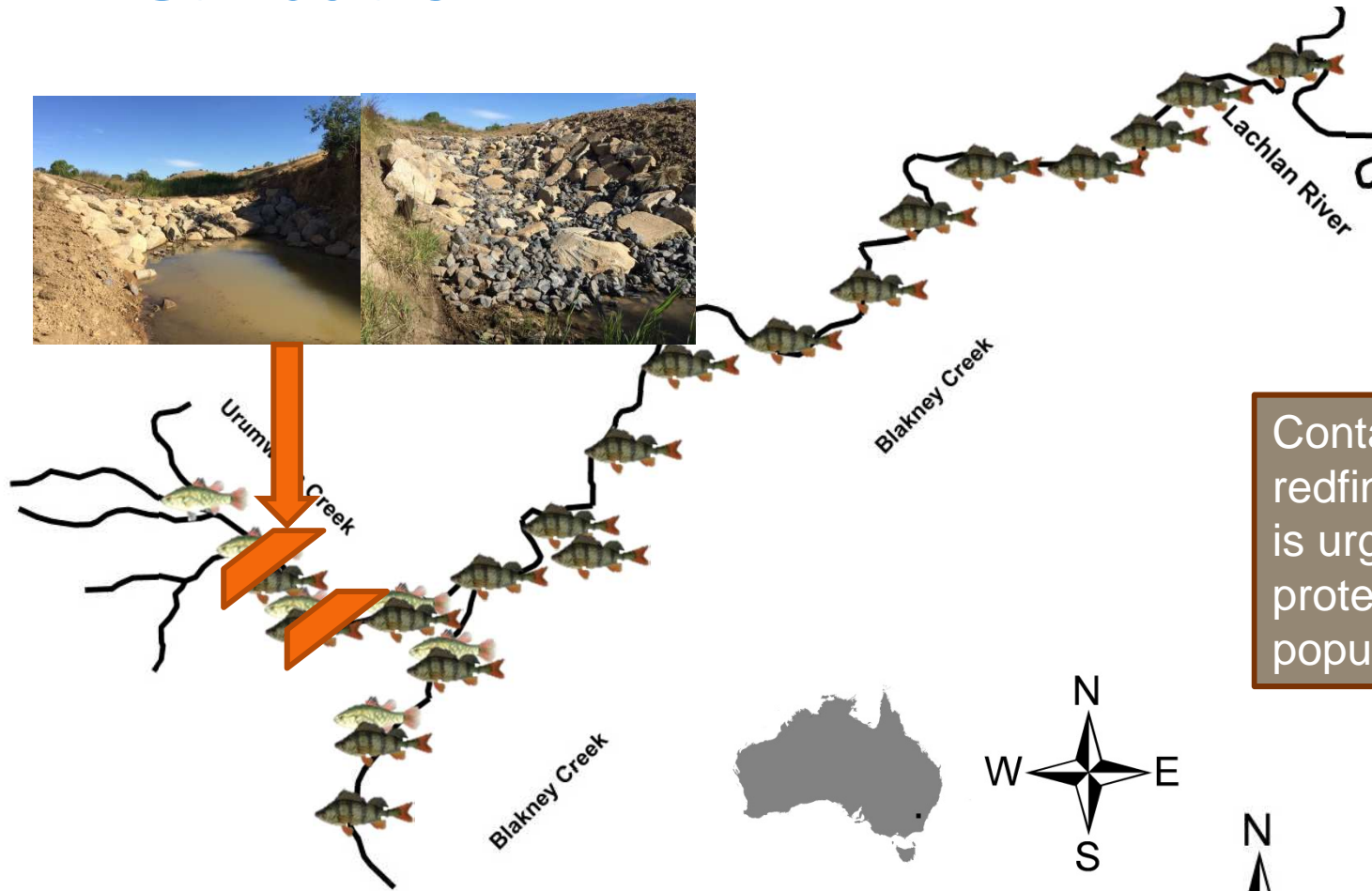
Distribution



Distribution

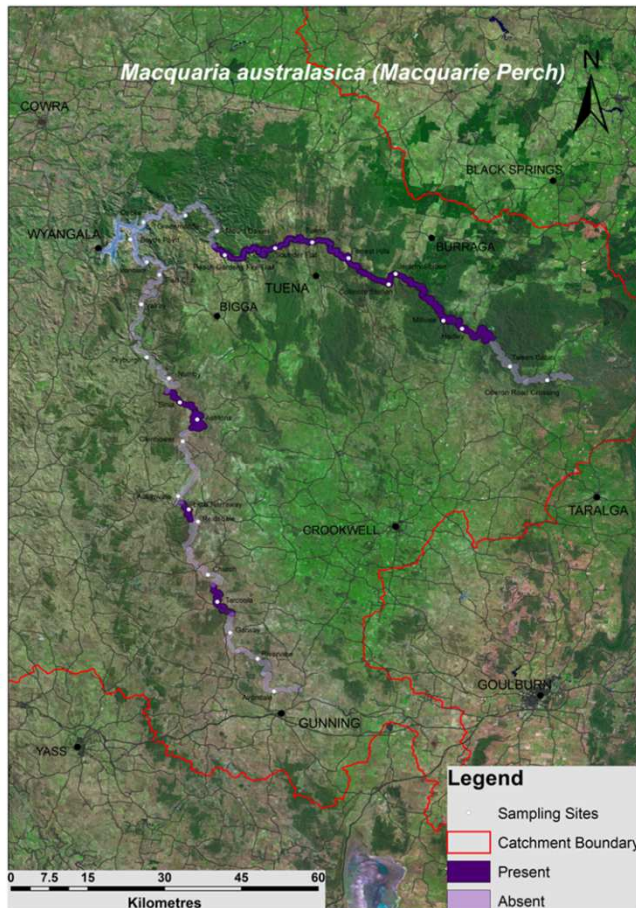


Distribution



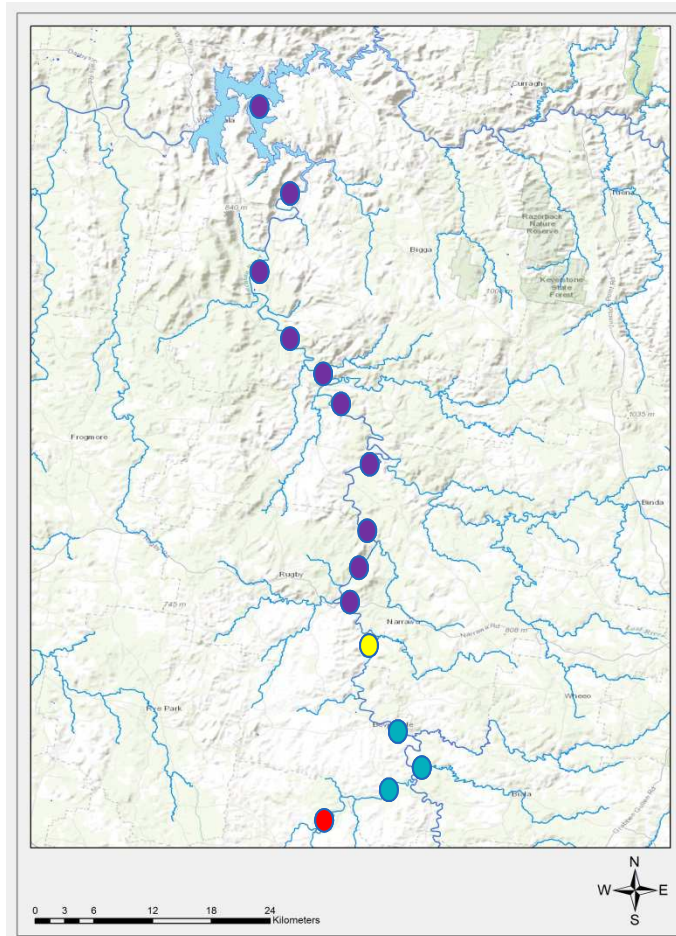
Containment of the redfin perch population is urgently needed to protect the remnant population of SPP

Upper Lachlan and Retreat River



2006 Macquarie Perch Distribution





- 1 Nov 2005
- 3 April/May 2006
- 254 Dec 2006
- 2008 most dominant fish species present
- 2008 Sample at virtually ever site

Macquarie Perch now appear locally extinct from the Upper Lachlan River



Management Actions

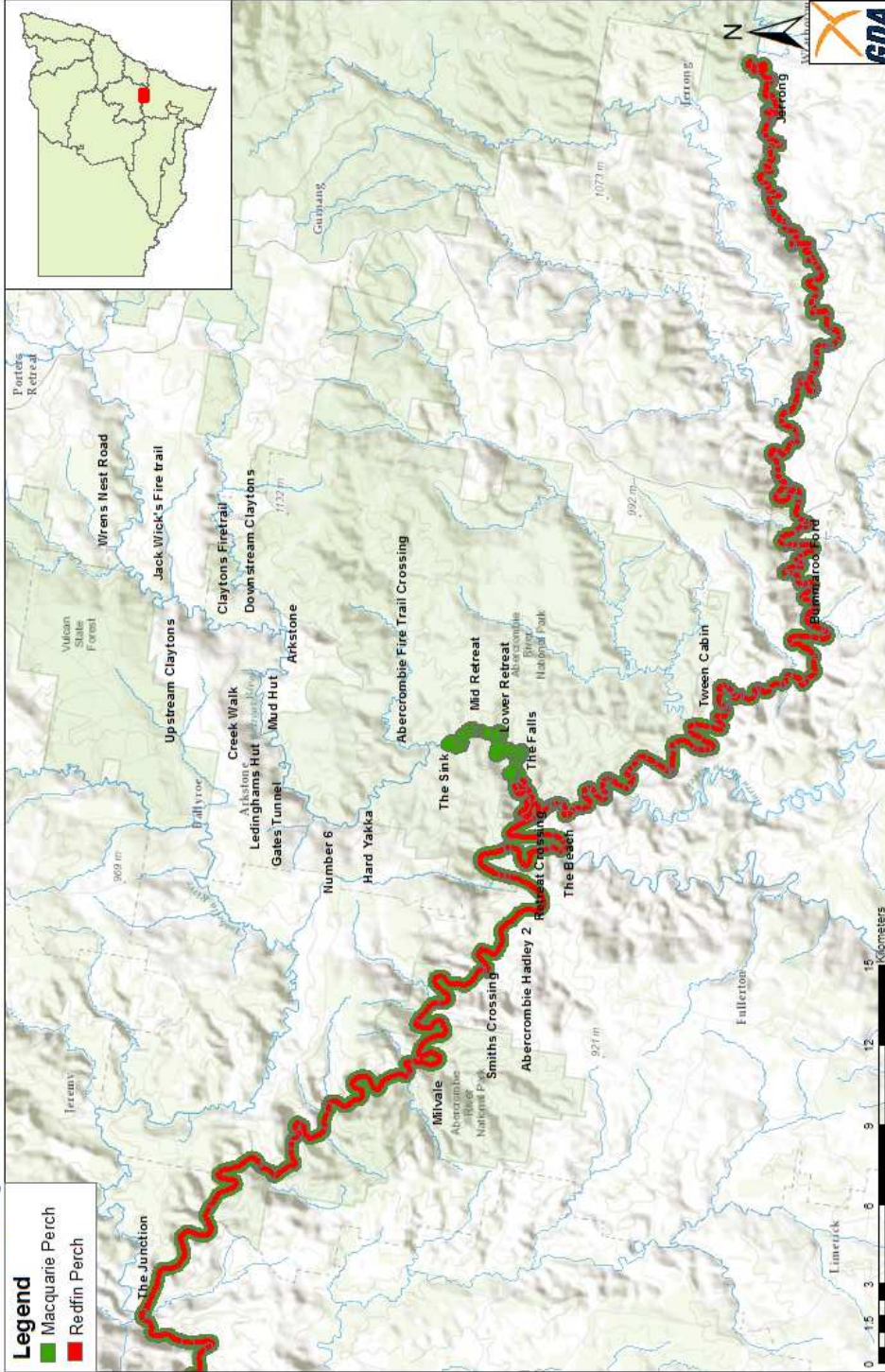
- Not feasible to construct barrier due to size of the system
- Rescued a representative of population
- Identify a natural barrier
- Developed captive breeding techniques
- Established a refuge population



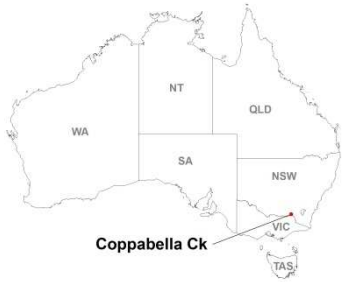
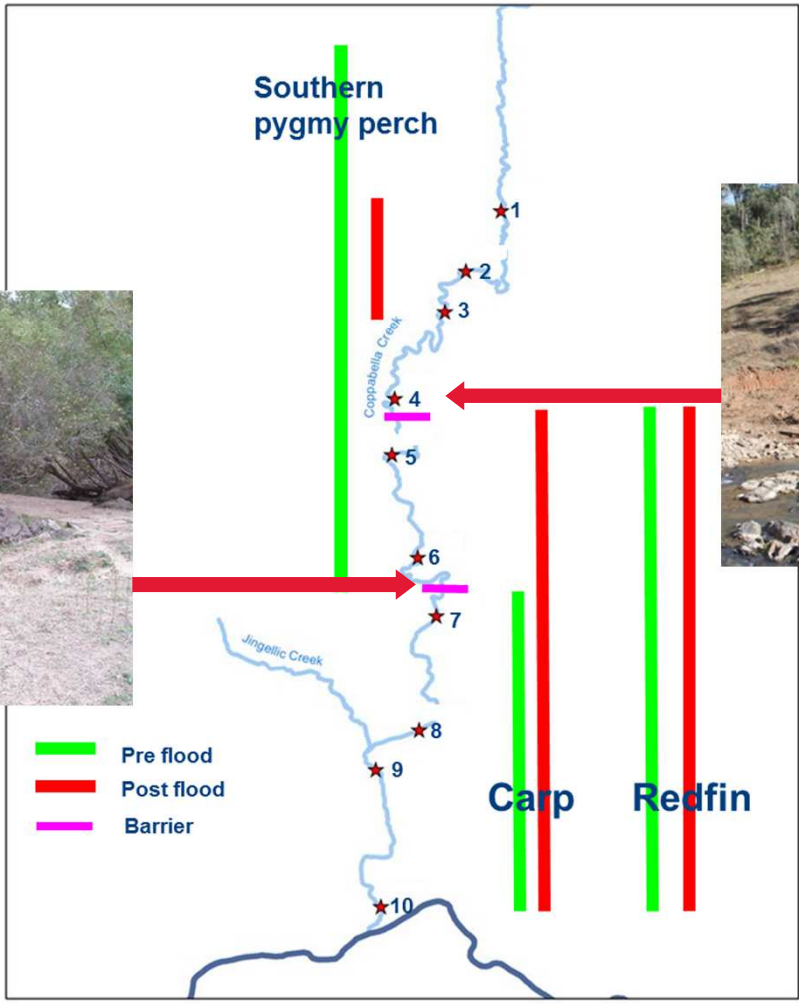


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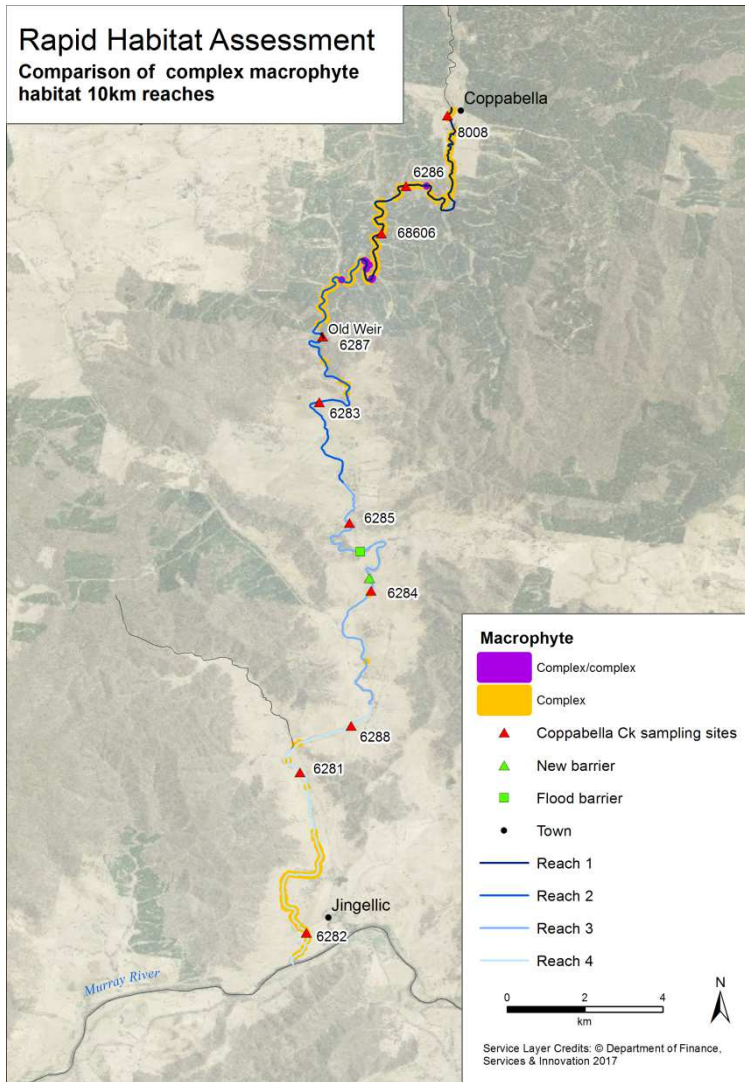
Macquarie Perch Refuge Project - eDNA Distribution



Coppabella Creek



Rapid Habitat Assessment
Comparison of complex macrophyte
habitat 10km reaches



Above



Below




NSW DPI


The assessment & prioritisation of barriers to fish passage in the **Murray Catchment**

Report to the Murray Catchment
Management Authority



 Natural Heritage Trust
Murray Catchment Management Authority
& Environmental Services

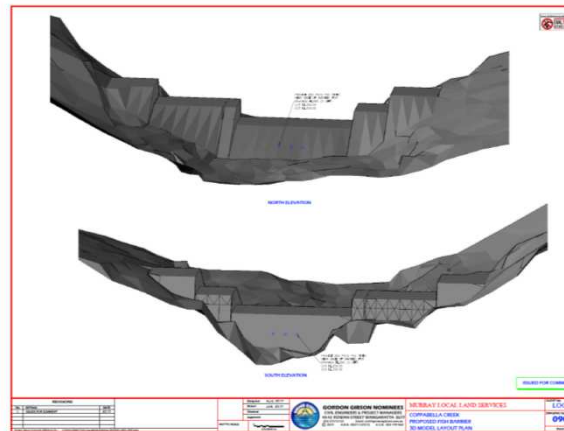
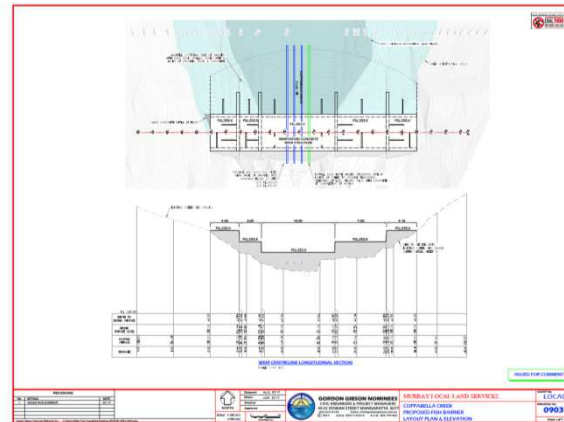
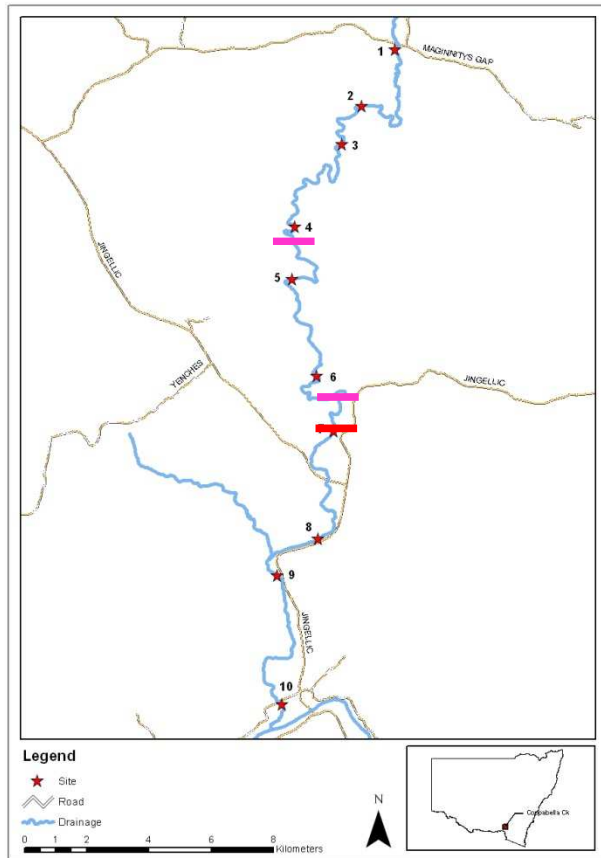
 Murray
CMA CATCHMENT MANAGEMENT AUTHORITY

 NSW DEPARTMENT OF
PRIMARY INDUSTRIES



- Medium Priority Barrier for removal

The Wall



- Pest fish removal
- Double current habitat
- ~\$400K
- Secure population

Summary

- **Barriers are important for protecting remnant populations**
- **No migratory species present**
- **Removal of barriers only assists gene flow**
- **Often little or no ecological data**
- **Clear ecological objectives for barrier removal in smaller systems**
- **Retaining or creating barriers may be beneficial for the containment of alien species**



Acknowledgements



Local Land Services
Central Tablelands



Local Land Services
Murray



Recreational
Fishing Trusts



UNIVERSITY OF
CANBERRA



Local Land Services
Riverina



Office of
Environment
& Heritage



CENTRAL ACCLIMATISATION
SOCIETY INC.
(FOUNDED 1937)

