

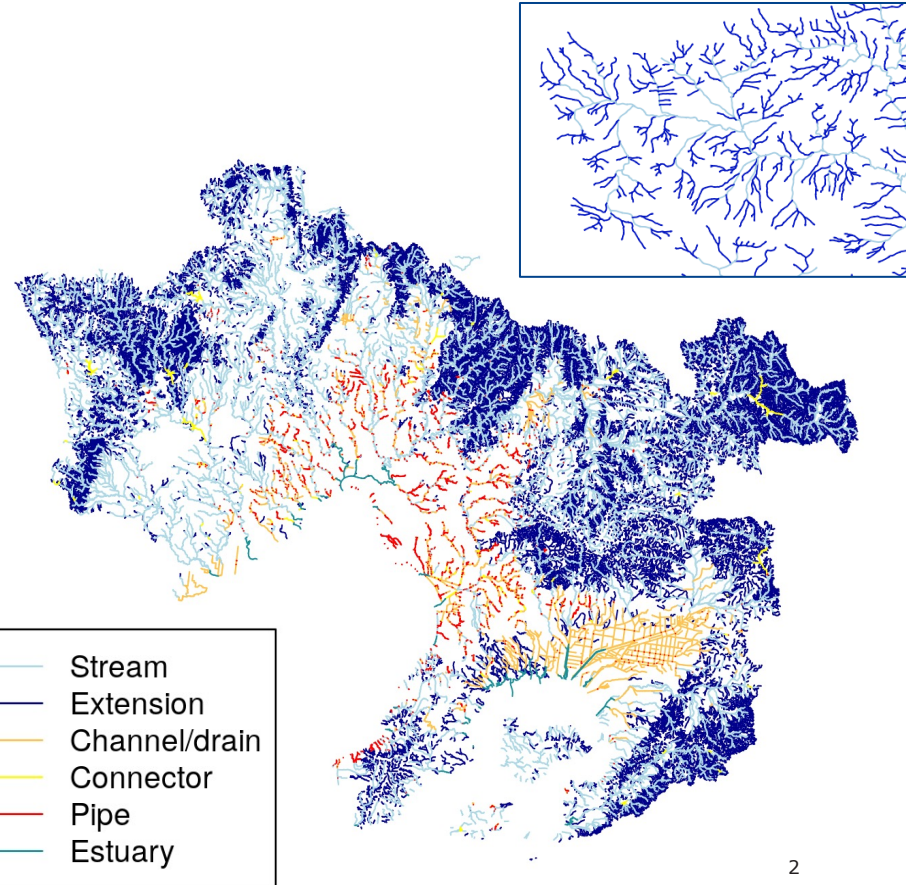


Tools & Principles for Protecting Headwater Streams in Urbanizing Areas

Belinda Hatt & Rhys Coleman

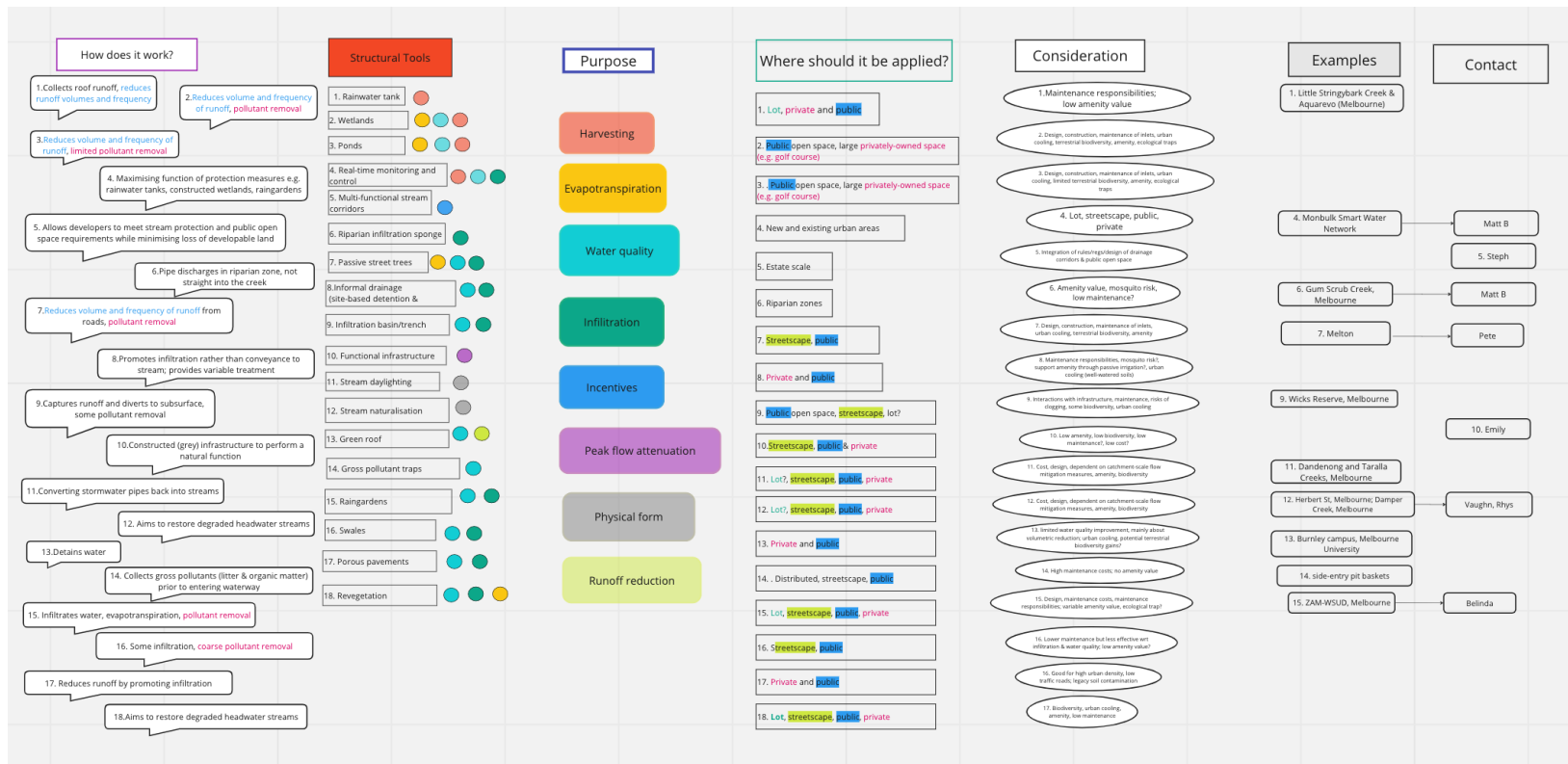
Why do we care about Headwater Streams?

- Important for several reasons:
 - Can be 60-80% of the river networks by length. Thus, important by number, length and area.
- Small, with high sediment surface area:water volume; biogeochemical hotspots.
- Being lost and degraded by agricultural & urban development at alarming rates.

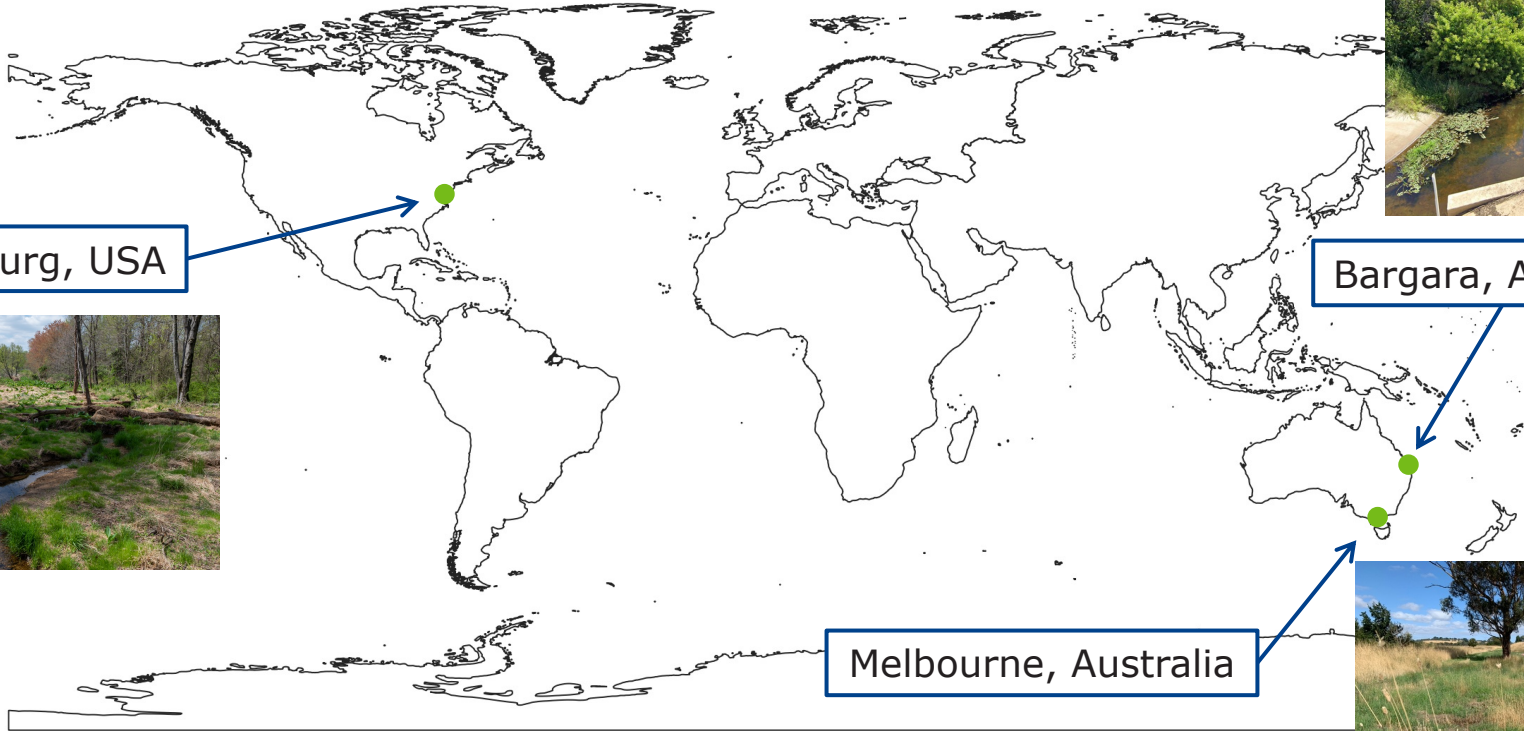


Tools for protecting headwater streams

OFFICIAL



Case studies



Clarksburg, USA



Bargara, Australia



Melbourne, Australia



Emerging Principles

- There is an order in which you need to do things (foundational activities through to on-ground action)
- Treatment at source
- Know where the streams are (can't protect them otherwise)
- Protection is likely to require multiple, complementary tools