

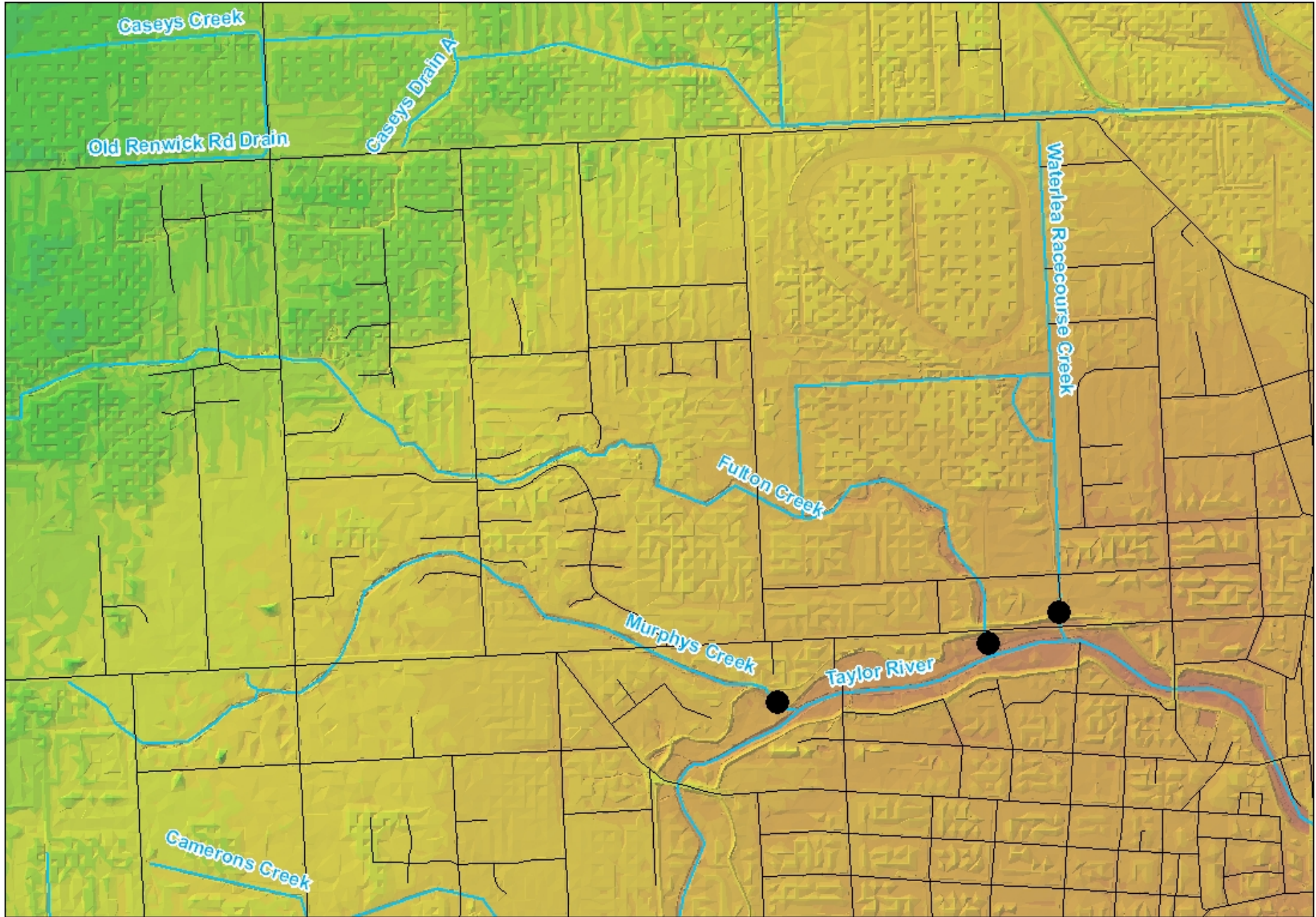


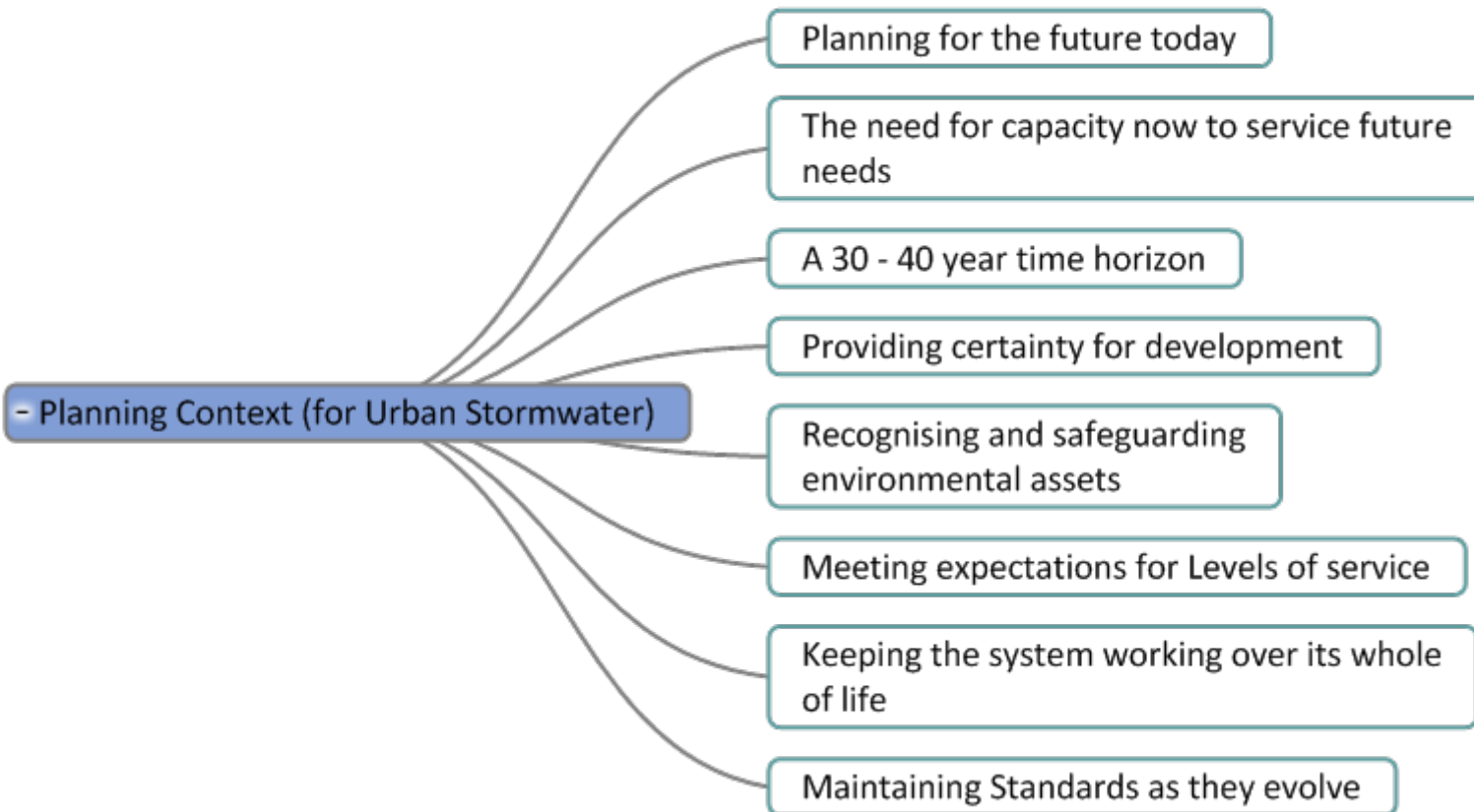
Murphys Creek Catchment

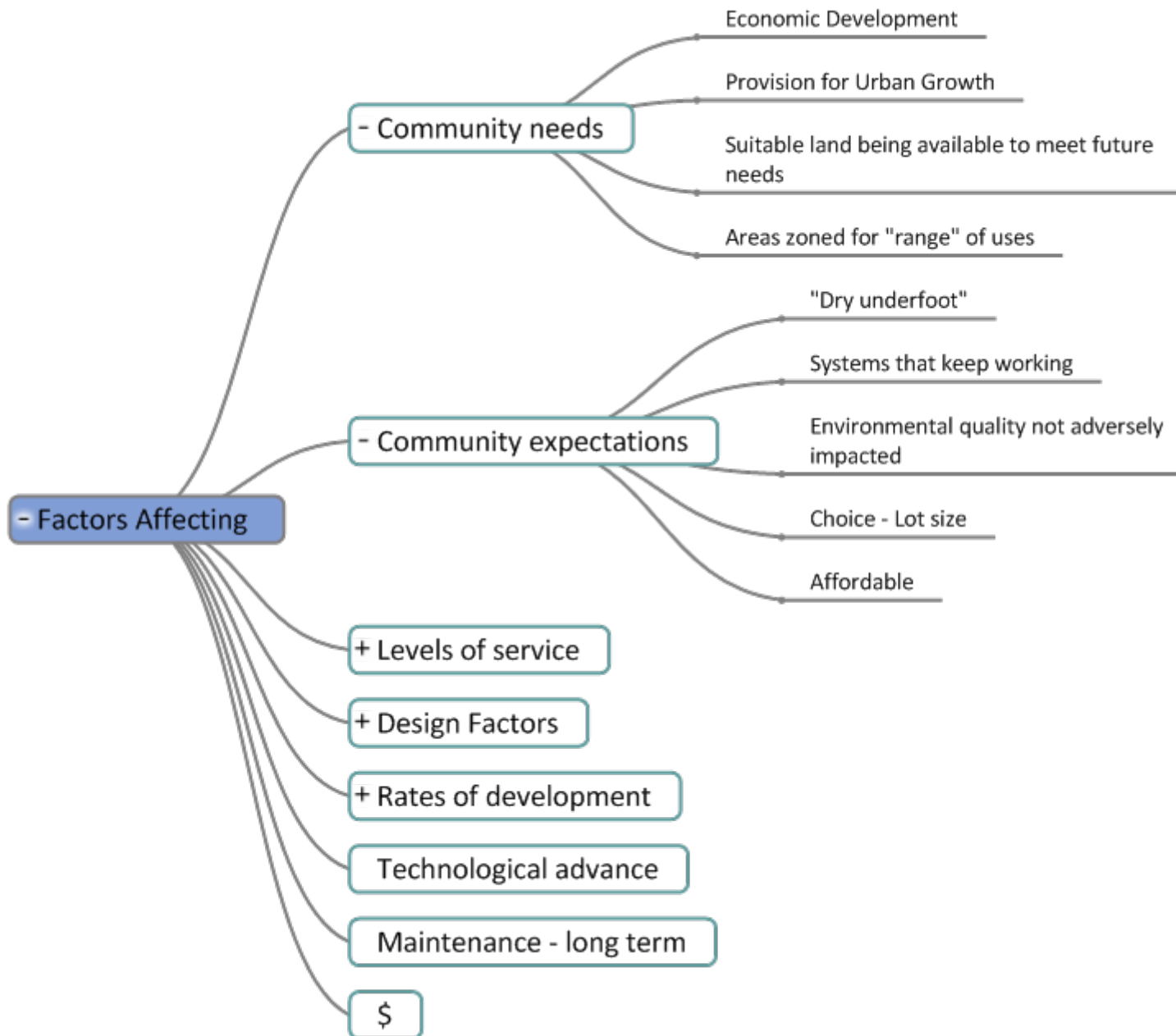
Middle
Renwick
Road
Culvert

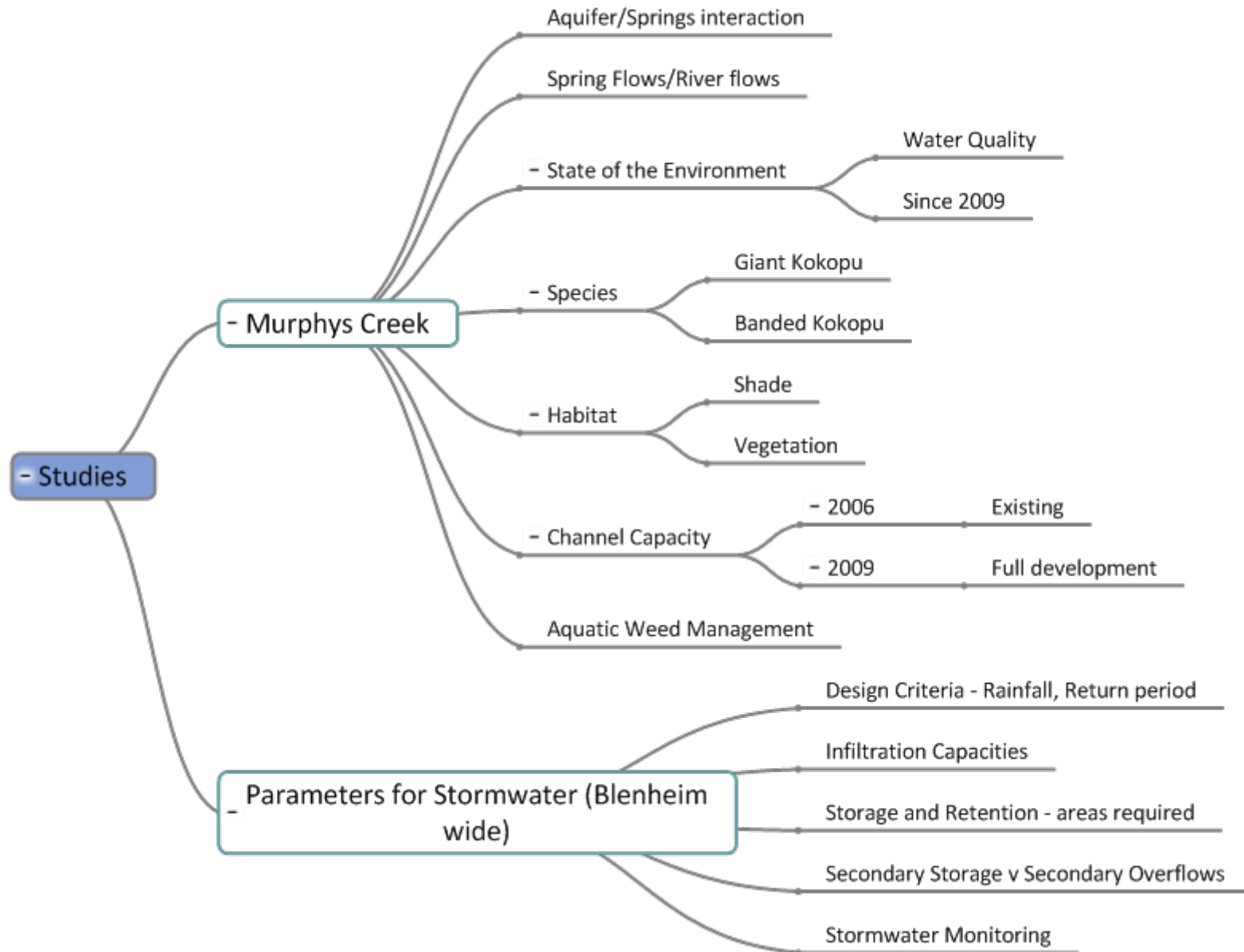
Springfed
Origins - Near
Severe Street

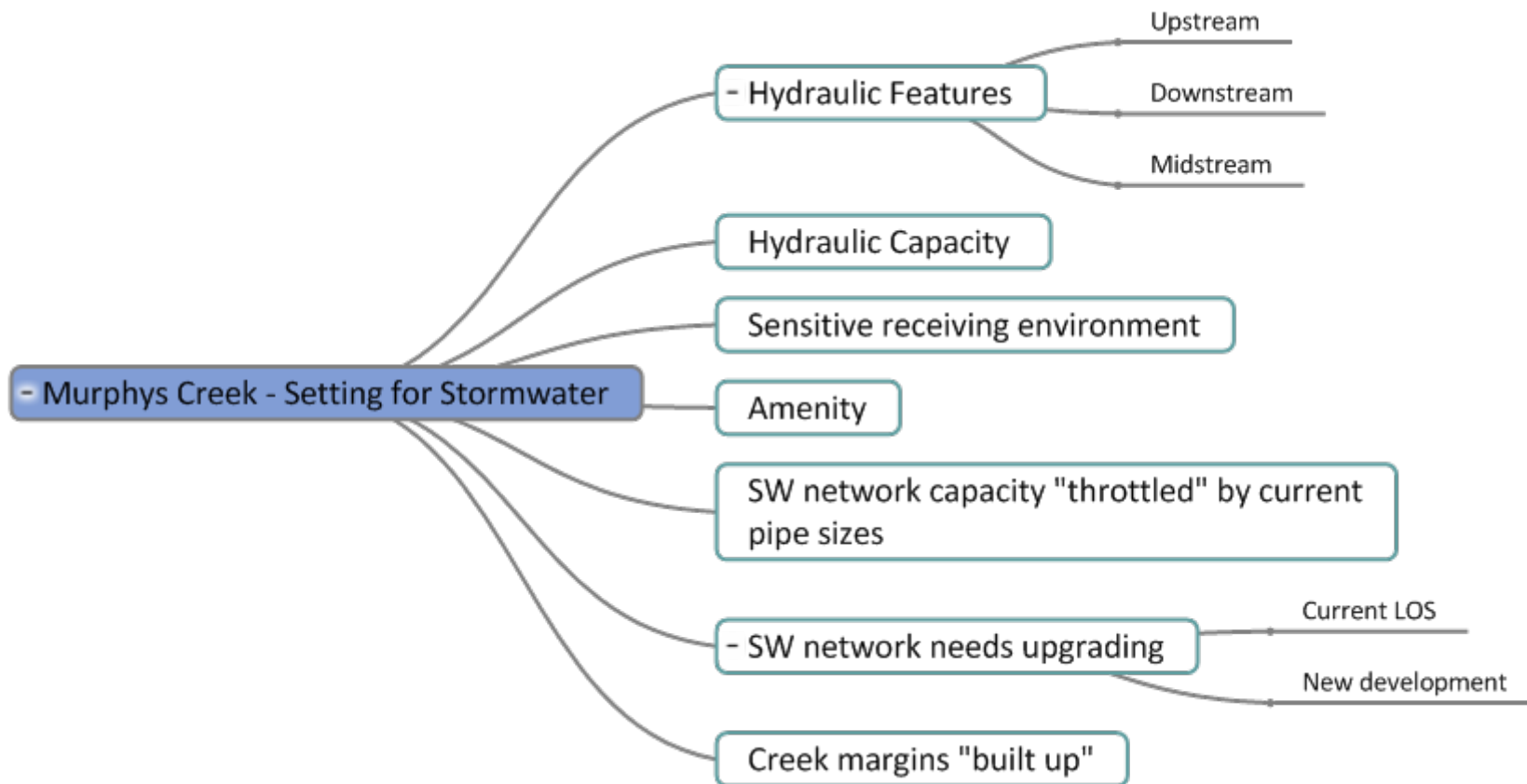
Outlet to Taylor
River

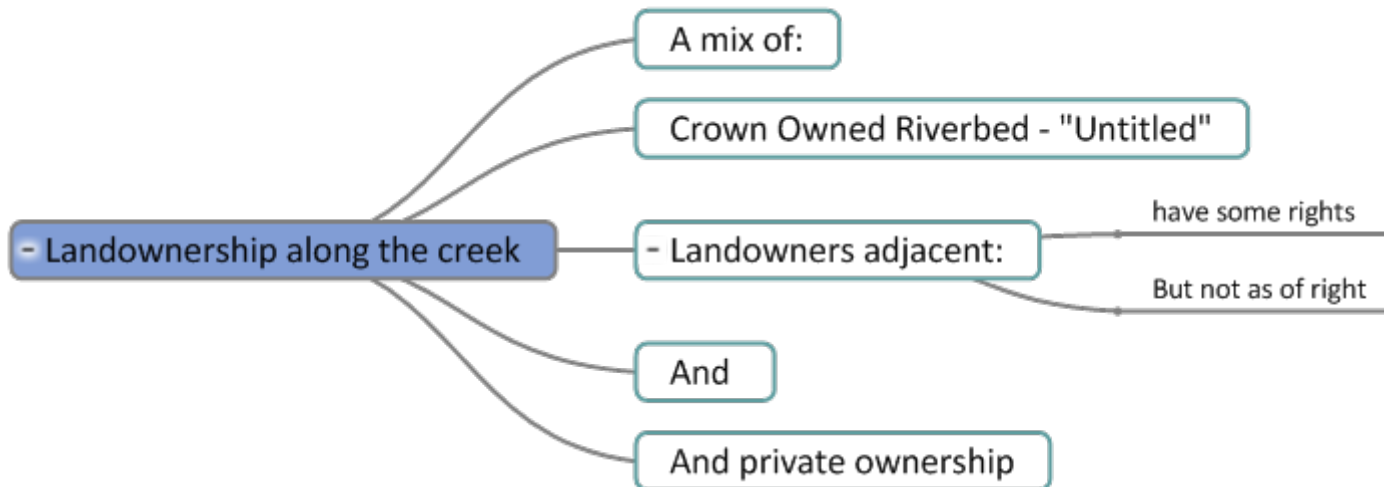


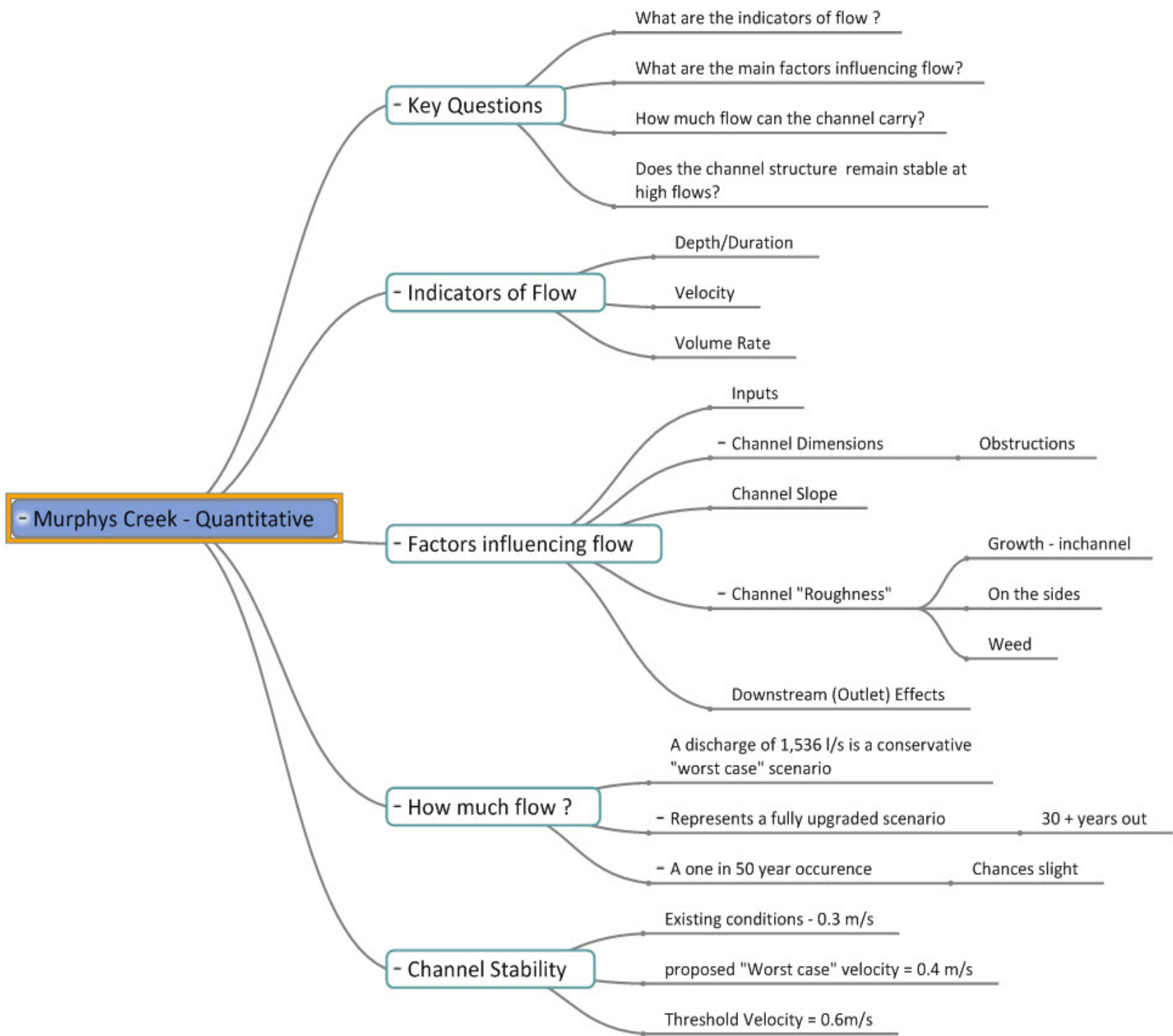


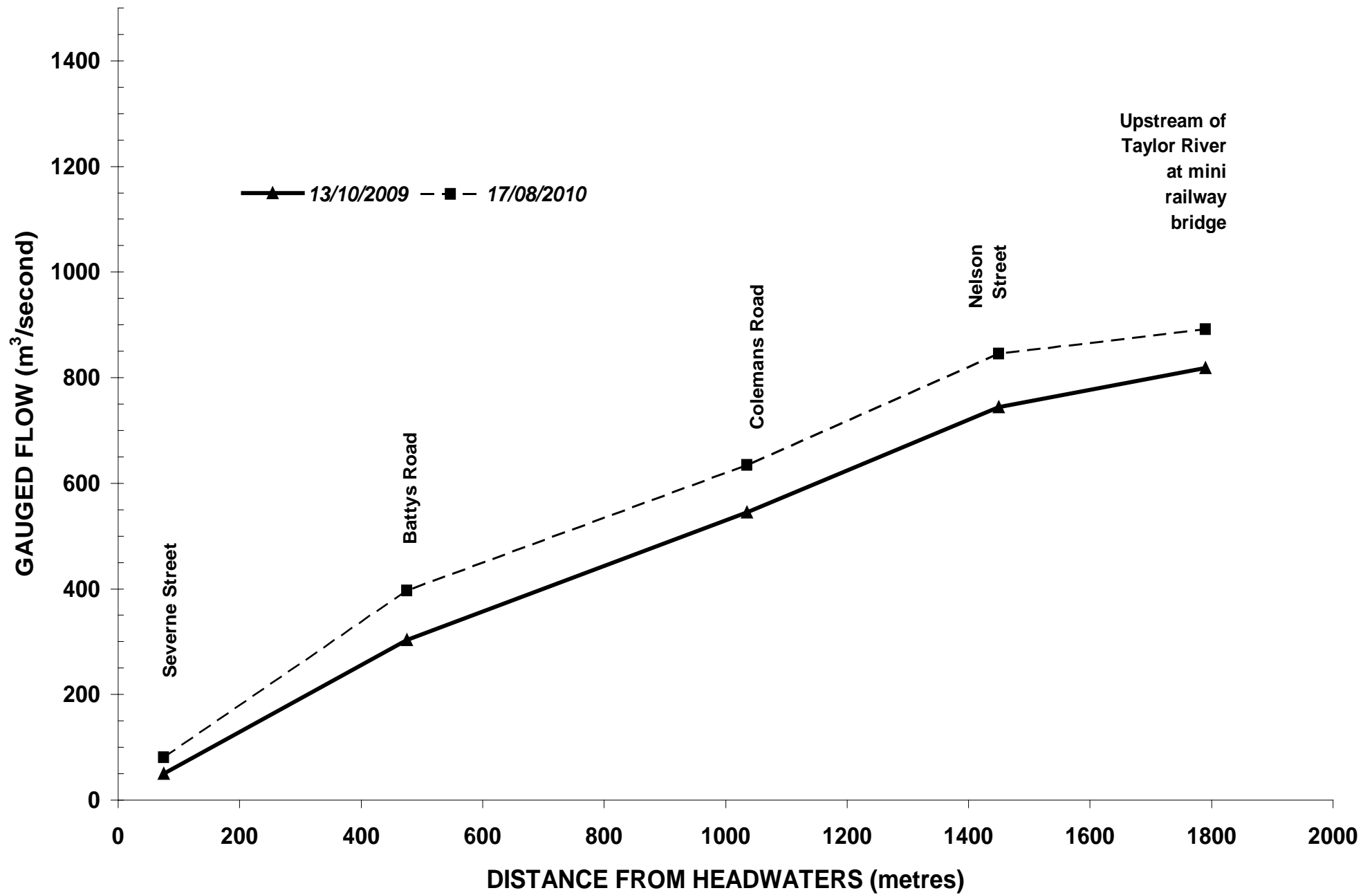












- Providing for Development

Stormwater Inputs from the developed catchment

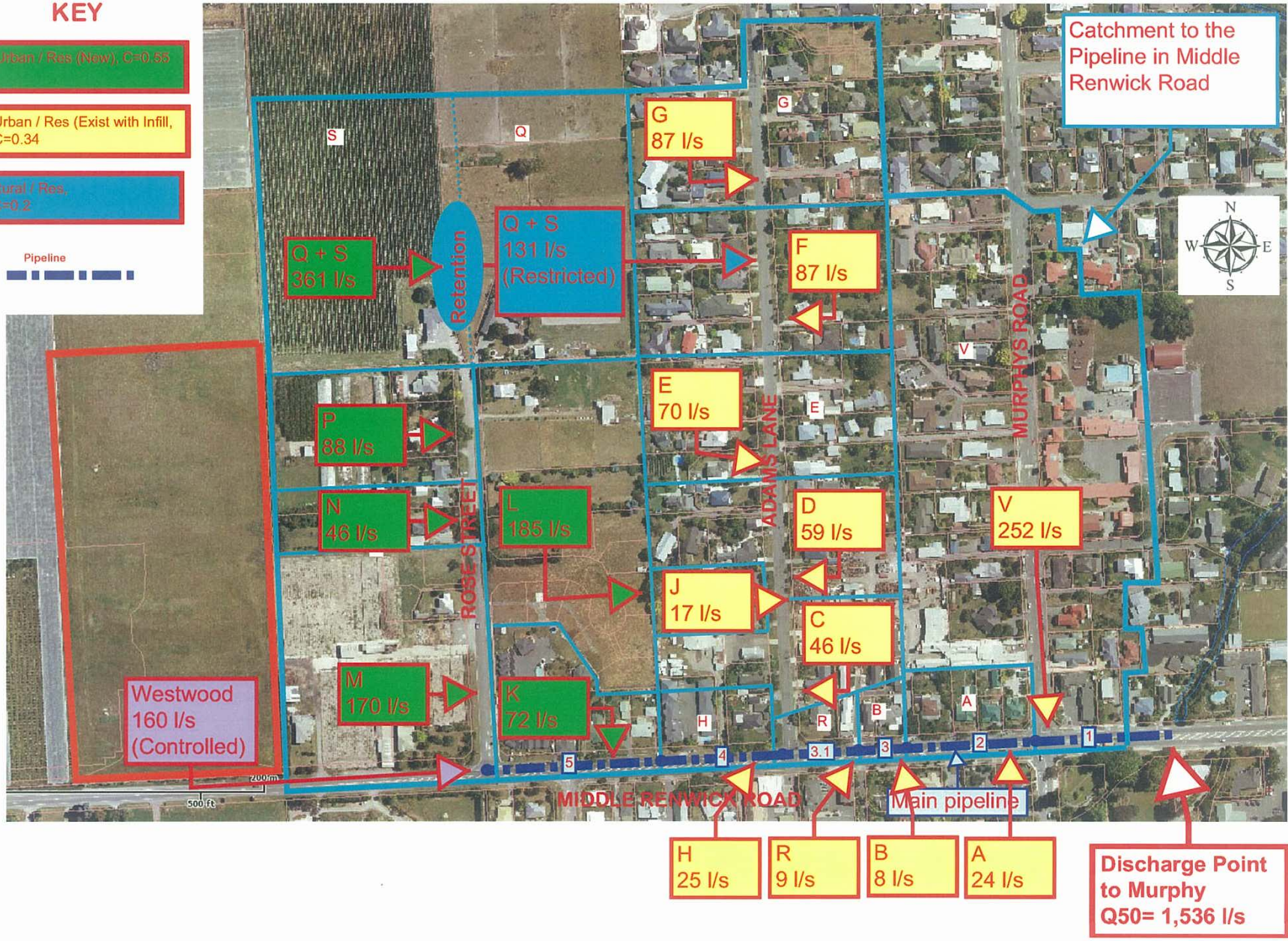
Middle Renwick Road Stormwater Pipeline

27/05/13

KEY

- Urban / Res (New), C=0.55
- Urban / Res (Exist with Infill, C=0.34)
- Rural / Res., C=0.2

Pipeline



	Model Studies	
Inputs from	2006	2009
Rural Input	0.4	0.4
Groundwater	0.8	0.8
Stormwater - Existing Area	1.3	2.1
Expected New Area	1.0	0.8
Totals	3.5	4.1
Flows in m ³ /s		



Just Downstream Discharge Point – June 17th 2013

Image A



Image D

23/09/2009 11:11



Image E

23/09/2009 11:09



Image L

23/09/2009 10:38



Looking downstream from towards Image M

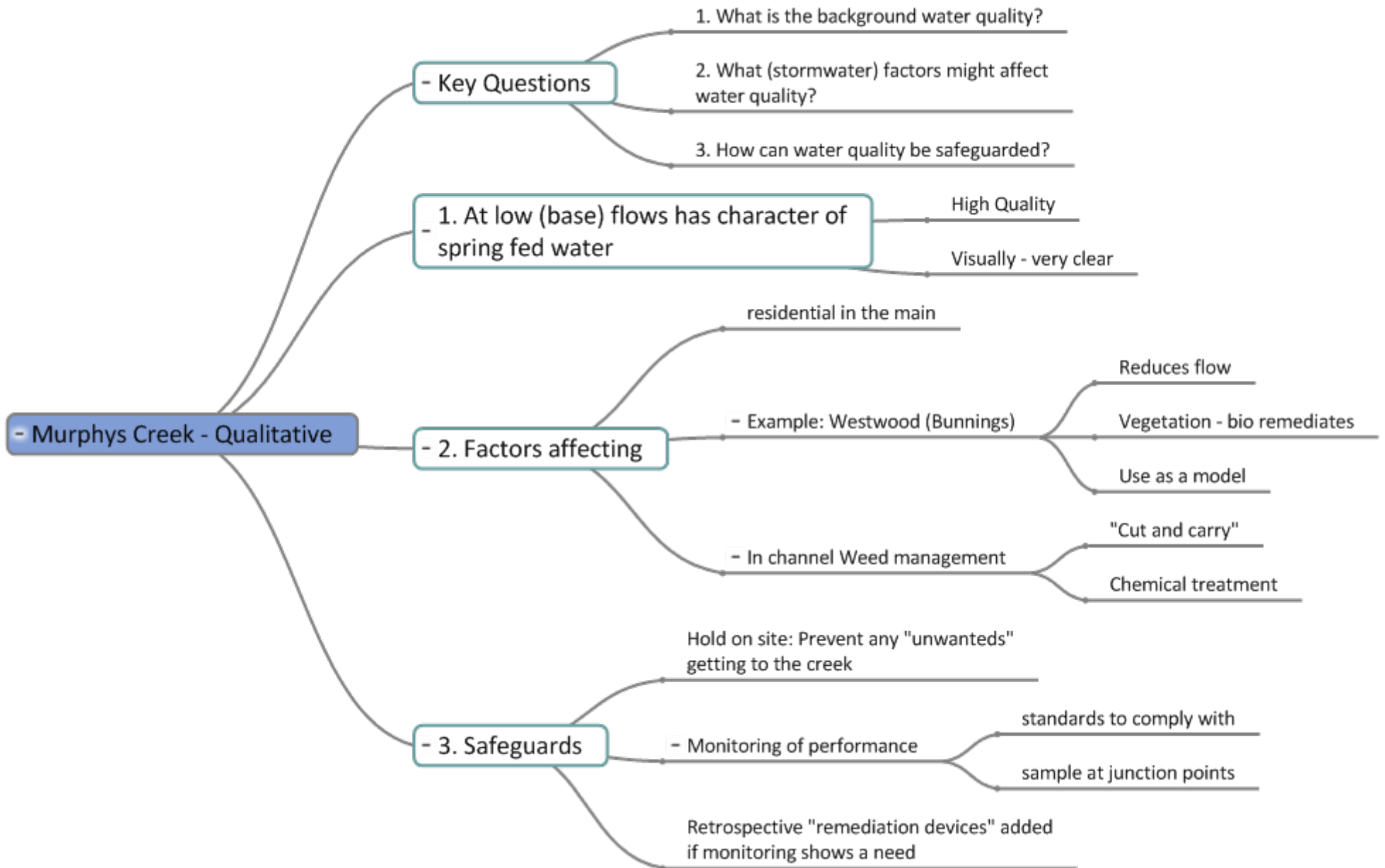
Image M

23/09/2009 10:29





Flow around right bank of "Island"

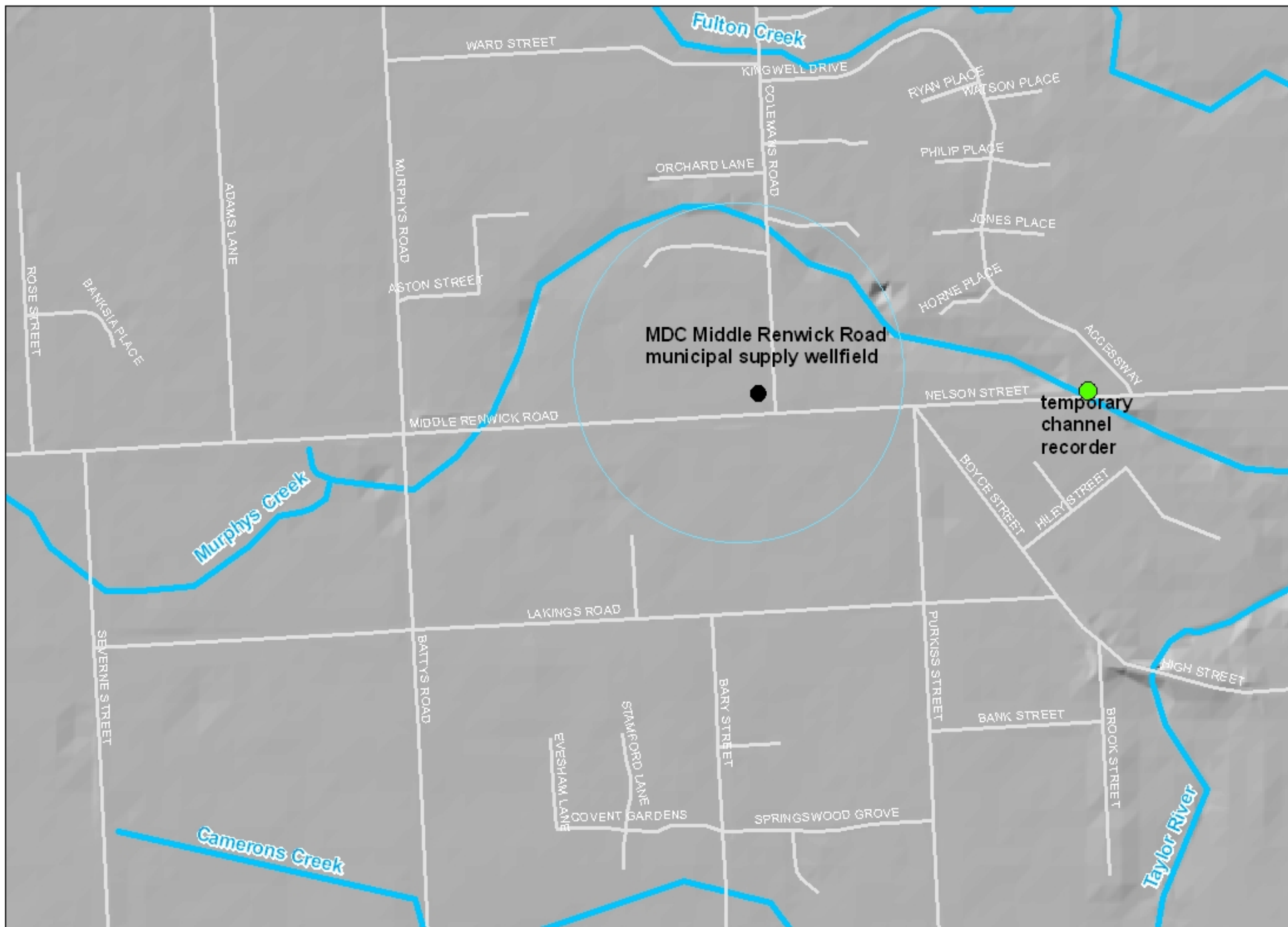




State of the Environment Monitoring – Monthly Since 2009



Murphys Creek Outlet to Taylor River – 17th June 2013





Storage Area – 9 August 2012



Storage Area – Stormwater Ponding – 9 August 2012



Main Collection/Storage Basin – 9th August 2012



Storage Area – Car Park – 18 June 2013



First Flush – Sediment Capture – Off Car Parks – 18 June 2013



Main Collection Basin – 18 June 2013



“Bio Remediators” - Vegetation Within Storage Area - 18 June 2013

- Resource Consent

- Development is a "moving target" - in time and space
- Strategy: Taking a conservative/worst case approach at the outset, refine in time with benefit of current intelligence
- Services require consenting. The A&S Dept of Council to apply for a Resource Consent
- Consnet to discharge of 1,536 litres per second of stormwater to Murphys Creek at Middle Renwick Road Culvert
- Will enable future needs to be met over time - upgrade existing network; allow for new development
- In MDC's capacity as a service provider and - manager of stormwater assets - on behalf of the community
- Not for discharges downstream of the discharge point
- This is Stage : ref SMAP - Stormwater Strategy
- 35 Year term - a maximum
- Despite 100 year life for pipe
- Section 128 - Formal mechanism to vary conditions, with term of consent

Not being done on behalf of developers



Pipeline – Middle Renwick Road – Inputs

