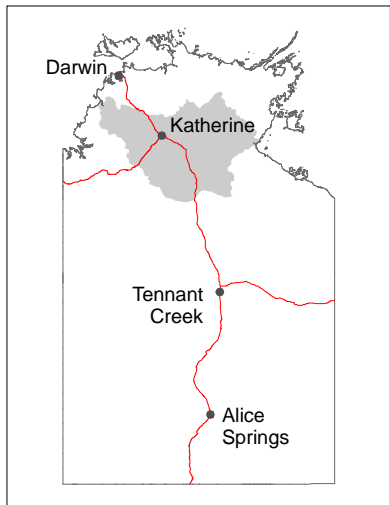
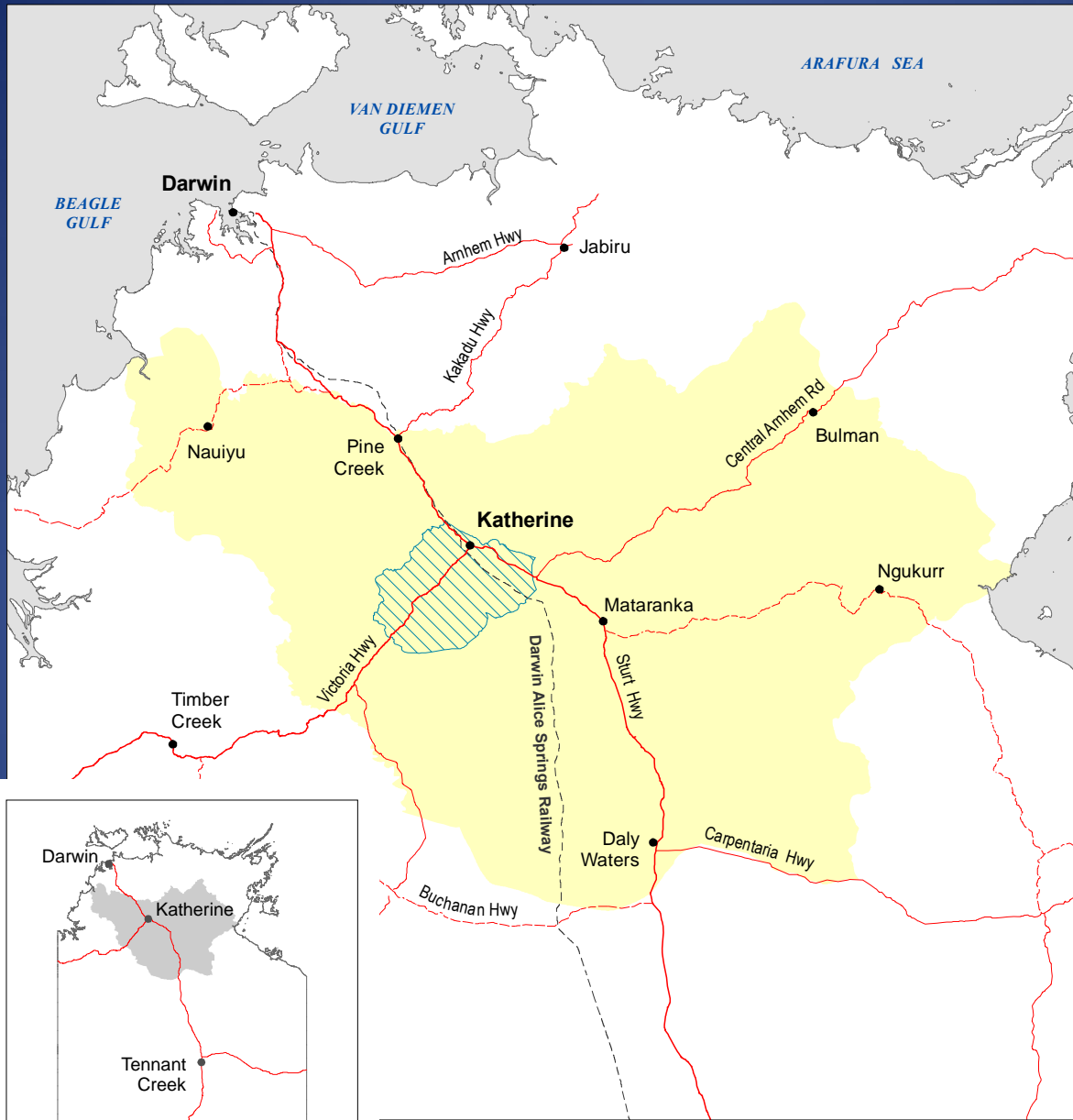




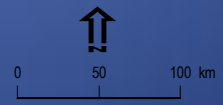
Ecosystem services in Australian statutory water planning

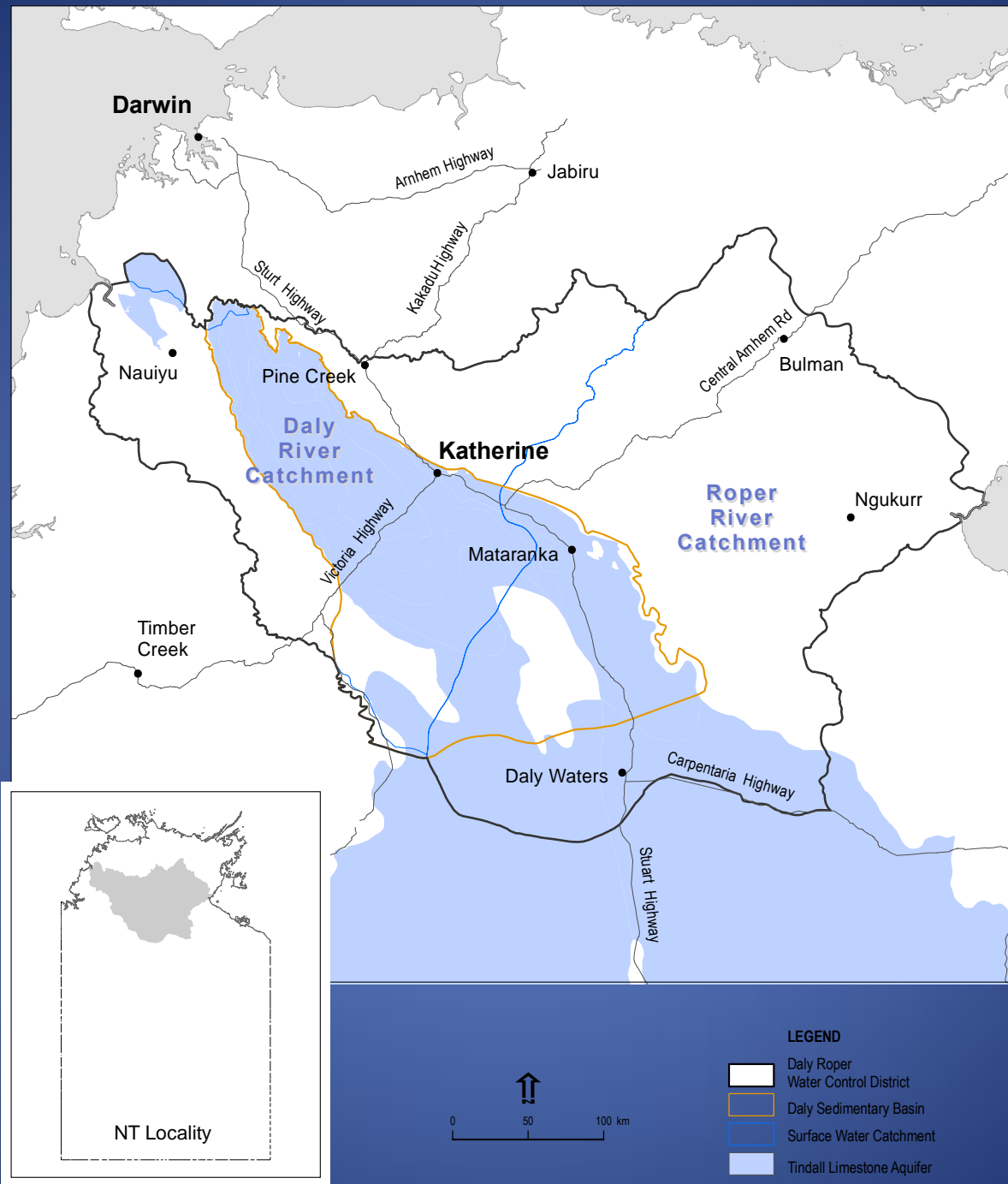
Water allocation plan for part of the
Tindall limestone aquifer near
Katherine, NT



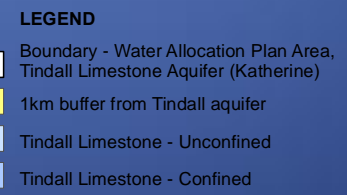
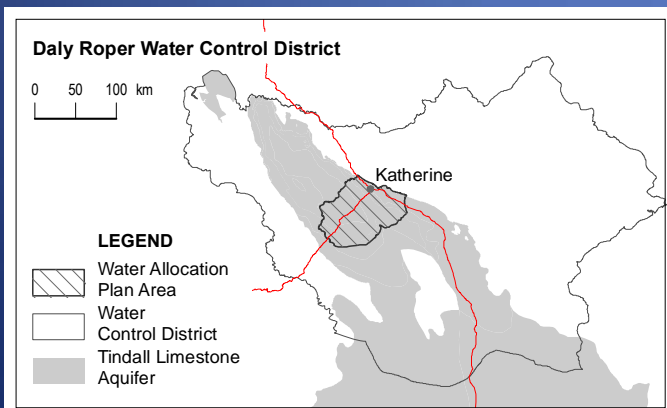
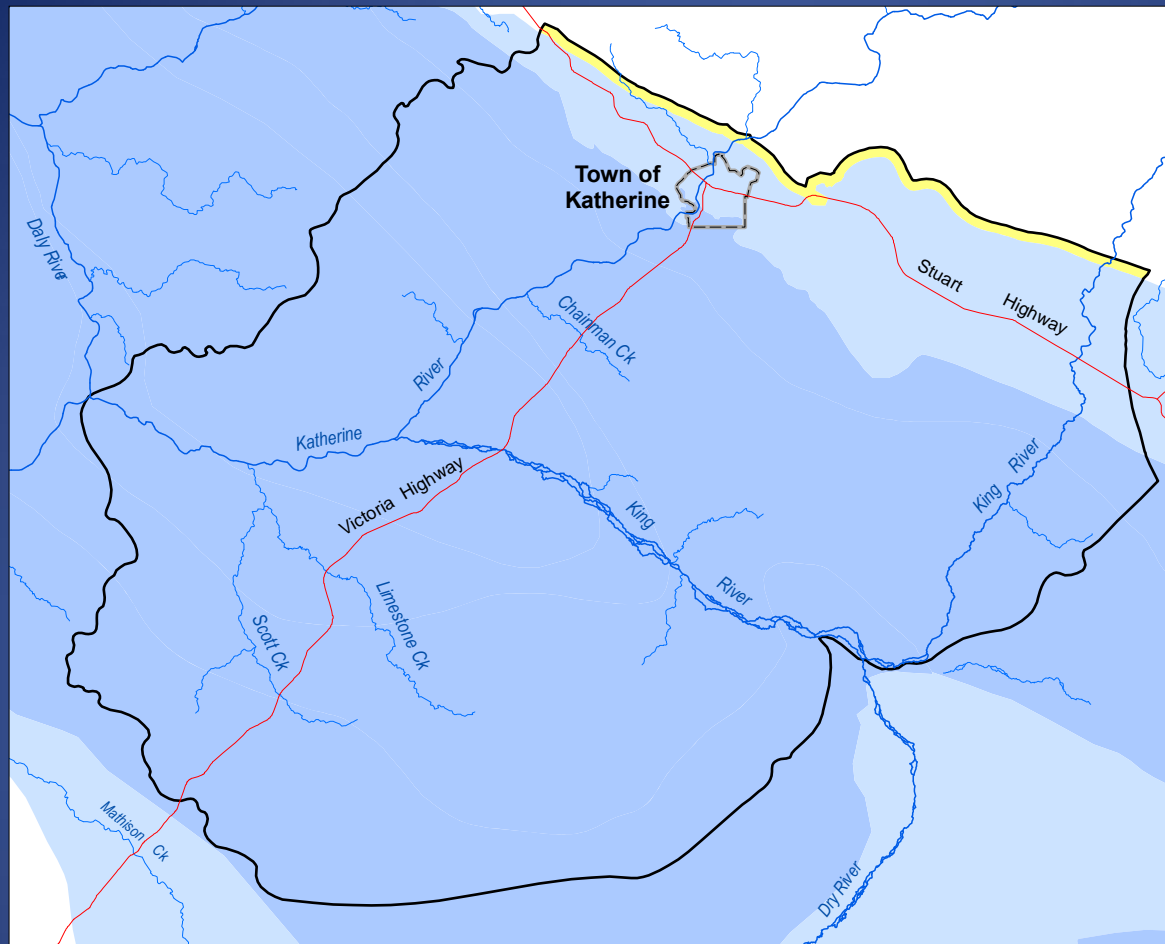
LEGEND

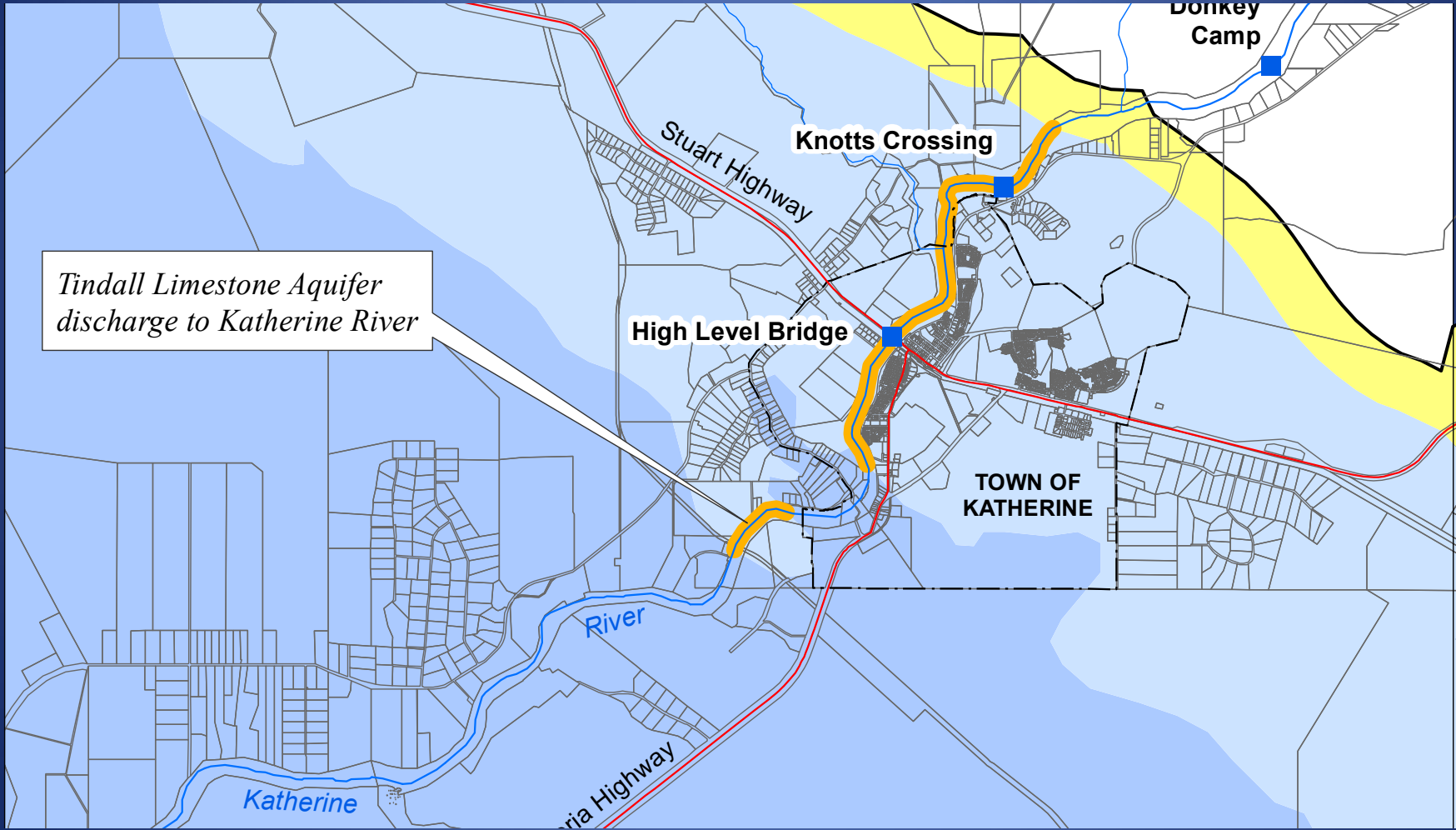
-  Boundary - Daly Roper Water Control District
-  Boundary - Water Allocation Plan Area, Tindall Limestone Aquifer (Katherine)





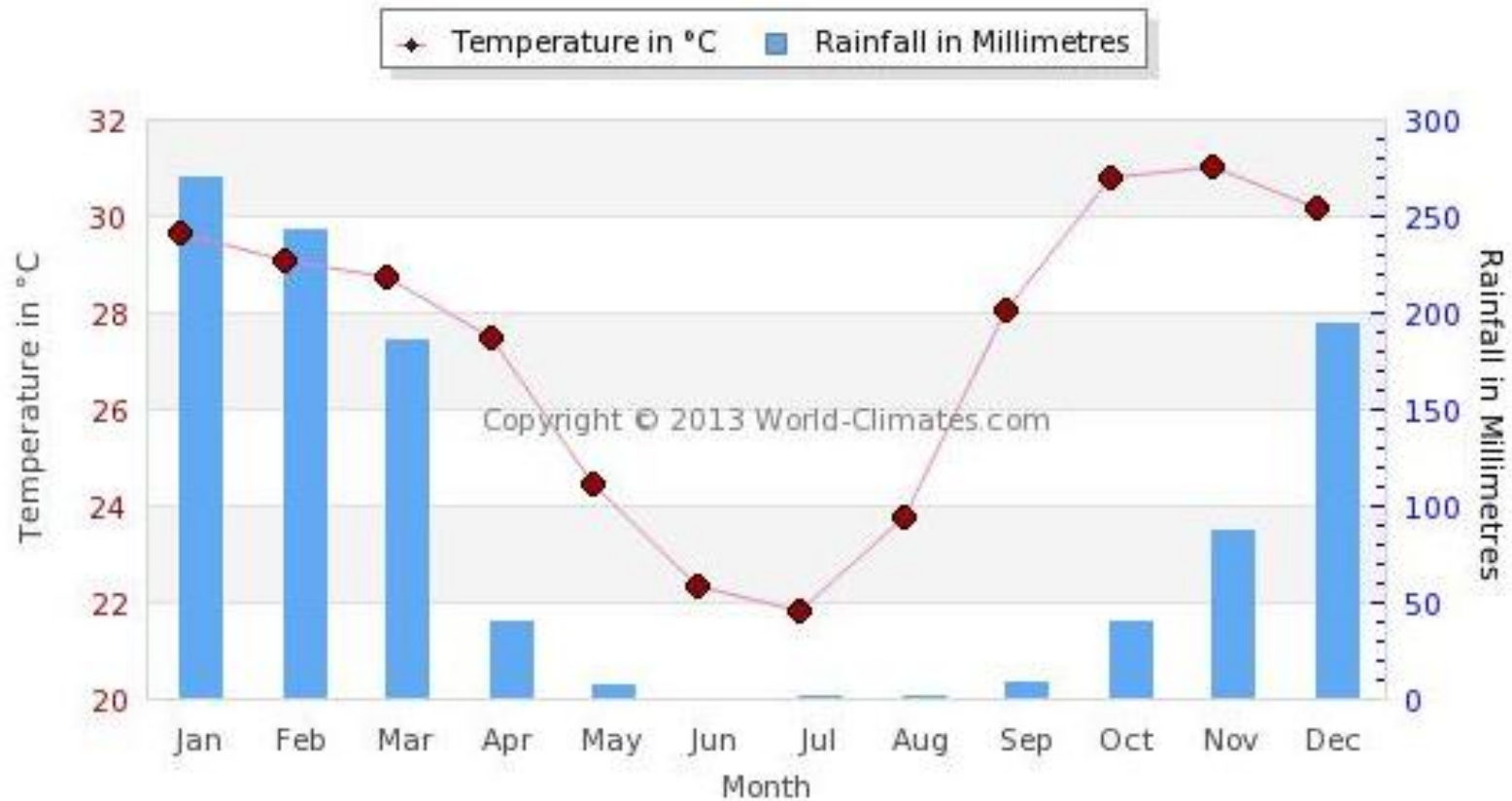
Map 1: Tindall Limestone aquifer with respect to the Daly and Roper River catchments







Average Rainfall and Temperatures in Katherine, Australia

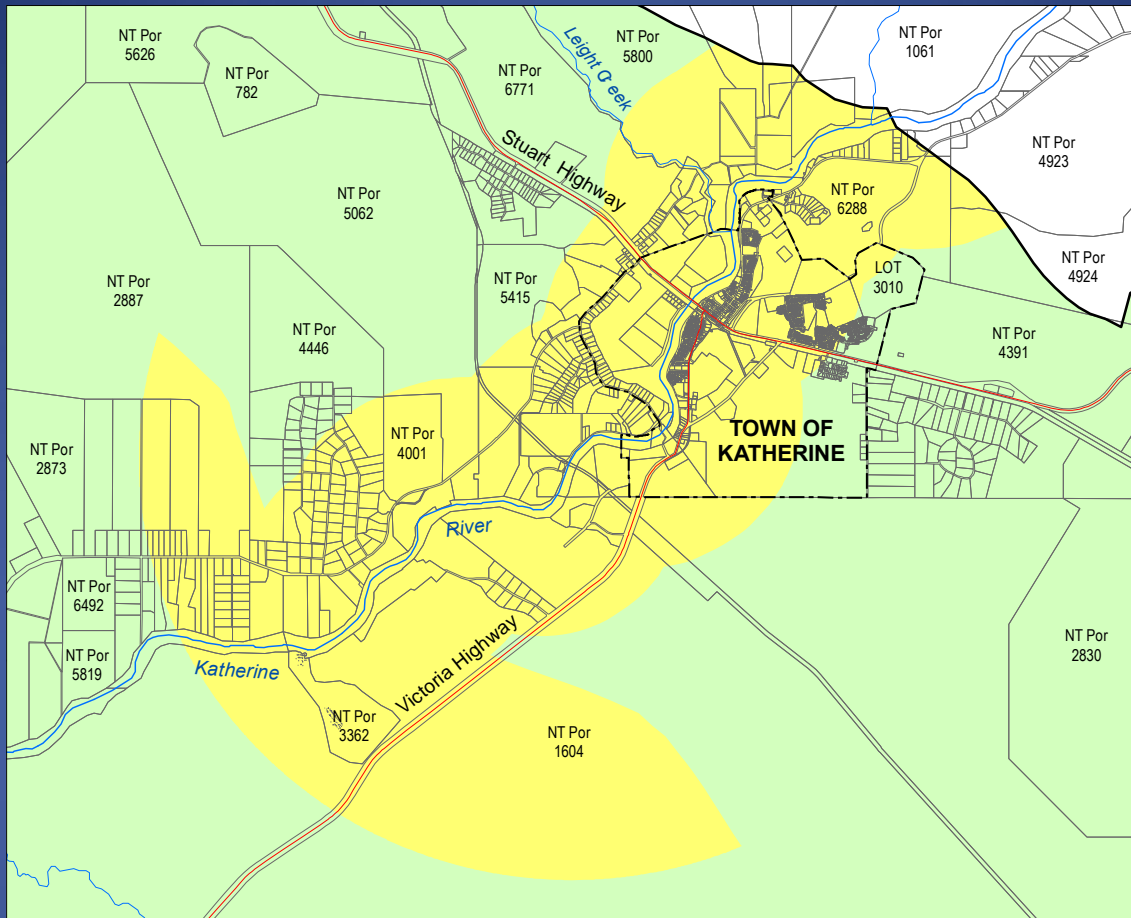


Benefits and beneficiaries...





Committee Member	Representing	Organisation
Ms Anne Shepherd	Chairperson	Katherine Town Council
Ms Jodie Locke	Local Government	Alderman, Katherine Town Council
Mr Rohan Sullivan	Pastoral	Chairman, NTCA
Mr John Ety	Conservation	Organic horticultural producer in the Katherine Region
Mr Preston Lee	Indigenous - Jawoyn	Trainee manager, Jawoyn Association Aboriginal Corporation
Mr Bill Harney	Indigenous - Wardaman	Traditional Owner, Katherine Region
Mr Gary Want	Department of Defence	Manager Base services, Tindal
Mr Warren De With	Recreation	President, Amateur Fisherman's Association NT
Mr David Higgins	Horticulture / Agriculture	Horticulturalist, Katherine Region
Mr David George	Power and Water Corporation	Natural Systems Engineer, PWC
Mr Mick Peirce	Community	Irrigator, Katherine
Mr Mick Jerram	Tourism	Owner, Gecko Tours, Katherine
Mr Peter Sinnott	Industry / Commerce	Farm Manager, Manbulloo Mangoes, Katherine

Result - regulations

- Extraction limit of 34,500 ML/yr
- No more than 15% of licensed extraction within zone 1



LEGEND

-  Boundary - Water Allocation Plan Area, Tindall Limestone Aquifer (Katherine)
-  **Zone 1 (< 1 year)**
Short term lag between extraction and impact on the Katherine River
-  **Zone 2 (> 1 year)**
Medium to long term lag between extraction and impact on the Katherine River
-  Cadastral property boundaries

Annual allocations based on protecting flows spring flows into river

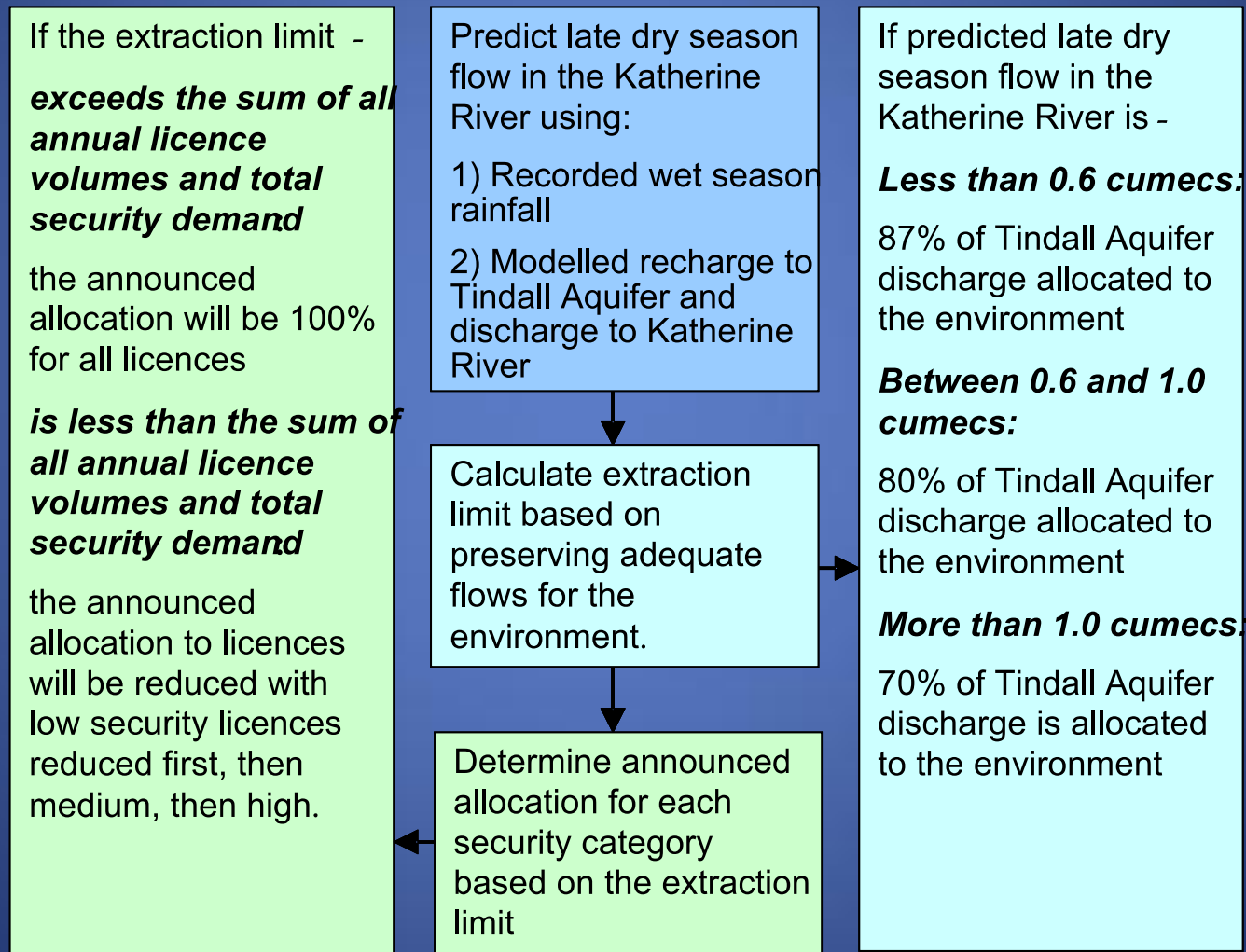


Figure 6: Process for determining annual announced allocations to licences.



Australian Government
National Water Commission



Recognising the broader
benefits of aquatic systems
in water planning:
an ecosystem services approach

**Roel Plant, Clare Taylor, Mark Hamstead
and Tim Prior**

Waterlines Report Series No 87, August 2012



Waterlines


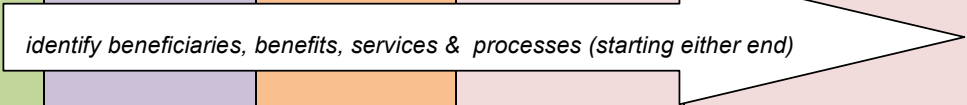
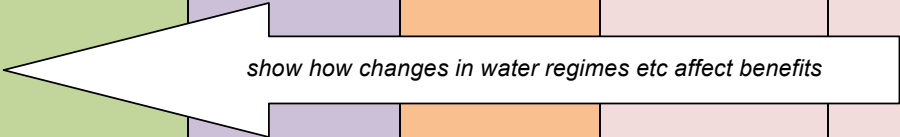

A SERIES OF WORKS COMMISSIONED BY THE
NATIONAL WATER COMMISSION ON KEY WATER ISSUES

- To systematically and transparently identify, describe and communicate the benefits and beneficiaries of aquatic systems, the services and ecosystem processes that underpin these and, importantly, the links between them



essentially
generates a
program
map...

- Basis for
- consultation and analysis
 - Outcomes and strategies
 - Measuring performance

Beneficiaries	Benefits	Services	Processes	
			water regime	other processes, functions or conditions
				
				
For example: <ul style="list-style-type: none"> · all residents of planning area · subset of residents of planning area · Indigenous communities · Australian community · irrigators · commercial fishers · tourism/recreation workers · walkers · 4WDers · recreational fishers · sporting clubs 	For example: <ul style="list-style-type: none"> · clean water · attractive areas to live/work near · income provided by use of aquatic system · protection from water related hazards · water for industry · attractive areas for recreation · sense of home, well-being, joy etc 	For example: <ul style="list-style-type: none"> · water purification services · water supply system & drainage · healthy floodplain & riverside plants · regulation of bank & channel erosion · mitigation of algal blooms & pollution · mitigation of water temperature & local climate · flood mitigation · frog calls, sun sparkling on water, bird song etc 	Water regime characteristics that support listed services as defined by scientific studies eg: <ul style="list-style-type: none"> · low flows · in-channel freshes · floodplain inundation 	Other processes that support the listed services as determined by scientific studies eg: <ul style="list-style-type: none"> · carbon cycling · nutrient cycling · sediment capture and release · food webs · catchment sediment retention etc

Increasing amount of scientific input

