

September 2021

Upper Brisbane and Stanley Rivers Catchment Action Plan 2021 - 2024

Resilient Rivers Initiative





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Executive Summary

The Upper Brisbane and Stanley Rivers Catchment Action Plan (CAP) was completed in January 2021 by the CAP Project Team with input from stakeholders through a series of meetings and workshops.

The Project Team included representatives from Council of Mayors (SEQ), Seqwater, the Department of Environment and Science (DES), Urban Utilities (UU), local government and Healthy Land and Water (HL&W). The CAP has been endorsed by the relevant councils and presents a prioritised list of actions which will help to deliver the goals of the Resilient Rivers Initiative.

The Upper Brisbane and Stanley Rivers CAP is a priority for the region under the Resilient Rivers Initiative given:

- It is located within four South East Queensland local government areas
- There is high value agricultural land, and also high ecological and conservation value waterways
- The Upper Brisbane and Stanley Rivers is a significant water supply catchment
- It is a strategically important part of the main water supply for SEQ – the catchment includes Wivenhoe and Somerset Dams, additionally, water from the catchment is piped to Cressbrook Dam in the Toowoomba region
- The Upper Brisbane River contributes significant volumes of sediment to Lake Wivenhoe and waterways downstream, mostly from gully and riverbank erosion



- Riparian vegetation cover is very poor and is prevented from regenerating because the dominant land use, grazing, is not managed any differently in waterways.
- Gravel and sand extraction in some locations has lowered the riverbed and destabilised riverbanks a long way upstream.

To secure the Resilient River Initiative's vision, this CAP provides an overview of the catchment's assets, threats and actions to mitigate the identified risks. The range of built and natural assets across the catchments present a

challenge for their effective management, highlighting the importance of both leadership and partnership to deliver a coordinated approach to successfully delivering the Initiative's vision of a "...resilient, productive, liveable and growing region." Table 1 outlines the recommended actions to be undertaken.

The matters in Table 1 are relatively broad priorities for the catchments. These broad matters are refined within the CAP, to provide more detail on actions (implementation pathway), priority locations, lead responsibility and timeframe.

Table 1: Upper Brisbane and Stanley Rivers CAP Actions (for more details see Section 3.)

Focus	Action
1. Institutional arrangements	Strengthen institutional arrangements at a catchment-scale level.
2. Best practice management and partnerships	Improve climate resilience, financial viability, and minimise soil and other pollutant loads to creeks.
3. Sedimentation and erosion	Promote activities which minimise soil loss.
4. Riparian vegetation	Assist riparian vegetation recovery in appropriate locations and look to protect vegetation including areas beyond the riparian zone, to provide an ecosystem service.
5. Pest management	Maintain existing riparian vegetation health. Ensure coordinated weed control and revegetation.
6. Water quality	Assess levels of pollution from point sources by working with owners of sewerage networks, effluent systems and septic systems to deliver potential system improvements.
7. Community education	Promote behavioural change.
8. Water resources planning	Ensure adequate provisions are incorporated into any updates/reviews of the relevant environmental water flow requirements detailed in the Moreton Water Resource Plan.
9. Climate change	Improve resilience during drought, flood and bushfire events.
10. Catchment investment and human resources	Assess current capacity within the community to establish current baseline and future needs.
11. Impacts to fisheries	Undertake a waterway assessment to identify key fish habitats and barriers to habitat continuity.
12. Recreational areas	Manage recreational areas in accordance with stakeholder frameworks.

1. About this Action Plan

Scope and purpose

The Upper Brisbane and Stanley Rivers Catchment Action Plan (CAP) has been prepared as part of the Resilient Rivers Initiative which has the following vision:

“By 2045, the catchments of South East Queensland will support a resilient, productive, liveable and growing region.”

This vision is documented in the Resilient Rivers Regional Strategy (2015-2025) which also has the following supporting goals:

- Keep soil on our land and out of our waterways to support agricultural productivity and improve water quality.
- Help protect our region’s water security so it can support the current and future population of SEQ.
- Improve the climate resilience of our region.
- Promote partnerships with strong leadership to deliver a coordinated approach to catchment management in SEQ.

The actions identified in this CAP contribute to achieving these goals. They have been developed in partnership with key stakeholders and use existing regional and local planning frameworks.

Achieving the 2045 vision requires a multi-faceted and collaborative approach for the strategically important catchments of the Upper Brisbane and Stanley Rivers. Investment is needed in these catchments, and is

vital to support a resilient, productive, liveable, and growing region.

This Catchment Action Plan:

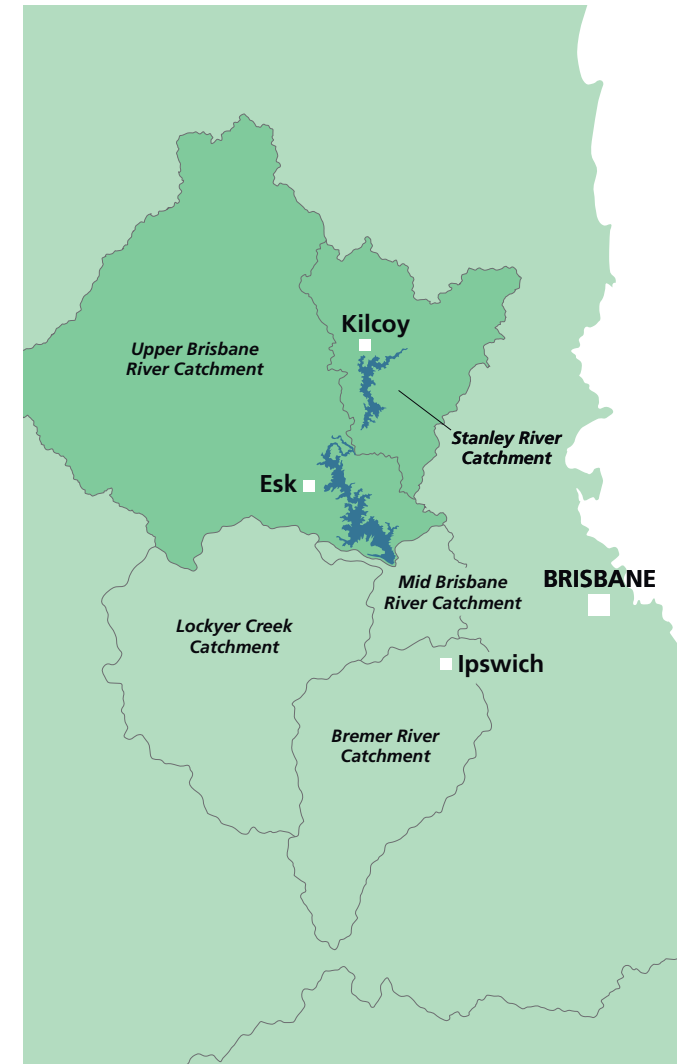
- Provides prioritised actions to achieve the Resilient Rivers Initiative vision based on the best of our knowledge and understanding and reflects the values of the key stakeholders.
- Identifies actions to mitigate risks in the catchment within the context of the Resilient Rivers Initiative.
- Helps with preparing strategic and prioritised investment to deliver on the identified actions.
- Aligns with existing regional and local plans.

The Upper Brisbane and Stanley Rivers CAP has been developed as a succinct, high level document for use by:

- Resilient Rivers Taskforce – presents rationale for investment in the Upper Brisbane and Stanley Rivers Catchments and priority actions.
- Project stakeholders – provides direction and basis for detailed project planning and further conversations between stakeholders.

A vast amount of work has been, and is currently being, undertaken across the Upper Brisbane and Stanley Rivers Catchments. The Upper Brisbane and Stanley Rivers CAP builds on this work to present actions which require collaborative implementation and investment to achieve the Resilient Rivers Initiative vision and goals. A summary of the key documents used in the development of the plan is provided in Attachment 1.

Figure 1: Regional context for the Upper Brisbane and Stanley Rivers Catchment Action Plan



Rationale for regional investment in the Upper Brisbane and Stanley Rivers Catchments

The Upper Brisbane and Stanley Rivers catchments are located to the west of Brisbane in the SEQ region (Figure 1). The catchments are strategically important to the region of SEQ. These catchments provide approximately half of SEQ's drinking water supply via the Mid Brisbane River and Mt Crosby Water Treatment Plant and are important for the future water security of SEQ. They are vital to the water supply for approximately 3.5 million residents in SEQ. As these catchments provide most of the water to SEQ, their protection is crucial.

The combined area of the Upper Brisbane and Stanley Rivers catchments is approximately 6,970 km² out of a total SEQ region of 22,990 km². It is anticipated that the population of the SEQ region will increase from 3.5 million (at 2016) to 5.3 million people by 2041 (DILGP 2017). Population growth is most likely to occur outside of the Upper Brisbane and Stanley Rivers catchments. However, the catchments will provide significant economic, cultural, recreational, and scenic amenity benefits to the region's existing and projected population.

The capacity of the two key dams located within these catchments needs to be preserved and protected. These dams are Somerset Dam (Stanley River catchment) and Wivenhoe Dam (Upper Brisbane River catchment), of which the latter is the largest dam in SEQ. These dams have been constructed for the purpose of both drinking water storage and flood mitigation.

These dams also hold significant recreational value to the region. Somerset and Wivenhoe Dams are used for several recreational activities, including fishing, boating, canoeing, kayaking, water skiing and picnicking.

There have been a number of significant floods in the catchments since European settlement during the 1800s and these appear to be the main drivers of system change. Significant erosion occurred in the lower reaches of the Upper Brisbane River as a result of the major flood in 2011.

The catchments hold significant environmental value. Approximately 25% of the Stanley River catchment is classified as National Park or Forest Reserve. The Conondale Aggregation are wetlands of significant natural value on the floodplains within the Stanley River catchment. These wetlands support native plants or animals that are considered endangered or vulnerable at the national level. Within the catchment there are also eucalypt forests and subtropical rainforests on the hillslopes.

Clearing during settlement has fragmented the wildlife corridors along the waterways in the Stanley River catchment. Endangered ecosystems within the Upper Brisbane River catchment include the Bunya Pine and *Eucalyptus tereticornis*. There are also communities of dry rainforest, vine thickets, tall open forests, brigalow and fringing riparian communities. Both catchments are being threatened by pest species, including Cats Claw Creeper.

Additionally, land clearing and historic sand and gravel extraction from the streambeds have influenced the streambank condition and catchment water quality.

The Plan's development process

Development of the Upper Brisbane and Stanley Rivers CAP was overseen by a project team consisting of representatives from Council of Mayors (SEQ), Seqwater, the Department of Environment and Science (DES), Urban Utilities (UU), local government and Healthy Land and Water (HL&W).

A broader stakeholder group was established with representatives from the project team in addition to representatives from community, industry and primary producer groups that represented the diverse interests across the catchment.

The collaborative process was undertaken to develop the Upper Brisbane and Stanley Rivers CAP following the five-step process provided by the Resilient Rivers Taskforce (Figure 2).

This included developing a risk assessment framework, carrying out the risk assessment, identifying and prioritising actions for the Risk Treatment Plan, and providing input to the Catchment Action Plan. Project stakeholders were consulted through a series of meetings and workshops and the time and effort they provided is greatly appreciated.



Step 1:

Catchment description - compile catchment characteristics data and analysis report, and hold workshops to gather information using the online Walking the Landscape mapping.

Step 2:

Catchment values and issues – identify assets and threats.

Step 3:

Risks and treatment actions – identify risks to assets, and preferred treatments via stakeholder engagement and workshops.

Step 4:

Prioritise actions – investigate the feasibility and likelihood of success.

Step 5:

Publishing – finalise the action plan document and seek endorsement from collaborators.

Figure 2: The five-step process provided by the Resilient Rivers Taskforce

2. The Catchment in context

Overview of the Plan Area

The Upper Brisbane and Stanley Rivers Catchment Action Plan incorporates two distinct catchment areas: the Upper Brisbane Catchment, and the Stanley River Catchment. The following section provides a separate overview of each catchment, due to the varied geology, land uses, and values between them.

The combined plan area is approximately 6970 km². The Upper Brisbane and Stanley River catchments are within the South Burnett Regional Council (SBRC), Toowoomba Regional Council (TRC), Somerset Regional Council (SRC), Sunshine Coast Council (SCC) and Moreton Bay Regional Council (MBRC) local government areas (LGA).

Policy and management context

The placement of the catchments across several LGAs makes management complex and there is currently no single organisation with a mandate to lead catchment management in the Upper Brisbane and Stanley River catchments. This lack of coordinated governance arrangements can lead to inefficient catchment management practices, unnecessary overlap, and duplication of scarce resources. Various organisations are involved in improving catchment and waterway health in the Upper Brisbane and Stanley River catchments. These organisations include QLD government agencies, local government, statutory water entities, NRM bodies, research groups, community/volunteer groups, landowners, and industry. The legislation and policy documents that are relevant to the CAP, are outlined in Attachment 1.

Private landowners are key. A landowner will have individual lifestyle and/or business goals as well as land and water use rights and responsibilities to consider. Goals and circumstances may change over time.

There are traditional owner (TO) groups within the Upper Brisbane and Stanley River catchments and indigenous values have been considered in a preliminary sense

as part of the CAP risk analysis. While some specific discussions with Traditional Owners were held during the development of this Catchment Action Plan the views expressed in this document do not carry their agreement or endorsement of this plan. Seqwater has an ongoing consultation process, separate to the CAP, that focusses on engagement with these TO groups.

The Upper Brisbane and Stanley Rivers Catchment Action Plan acknowledges the Traditional Owners, pays respect to Elders past, present and emerging, and recognises that the land, water, and seascapes form traditional landscapes that were spiritually and sustainably managed for thousands of years by Traditional Owners. The Catchment Action Plan recognises Traditional Owners including those who have been granted Native Title over land and sea Country and their active role in the ongoing management of cultural and natural resources; and the social, spiritual, and economic future of communities.

Upper Brisbane River Catchment

Catchment overview

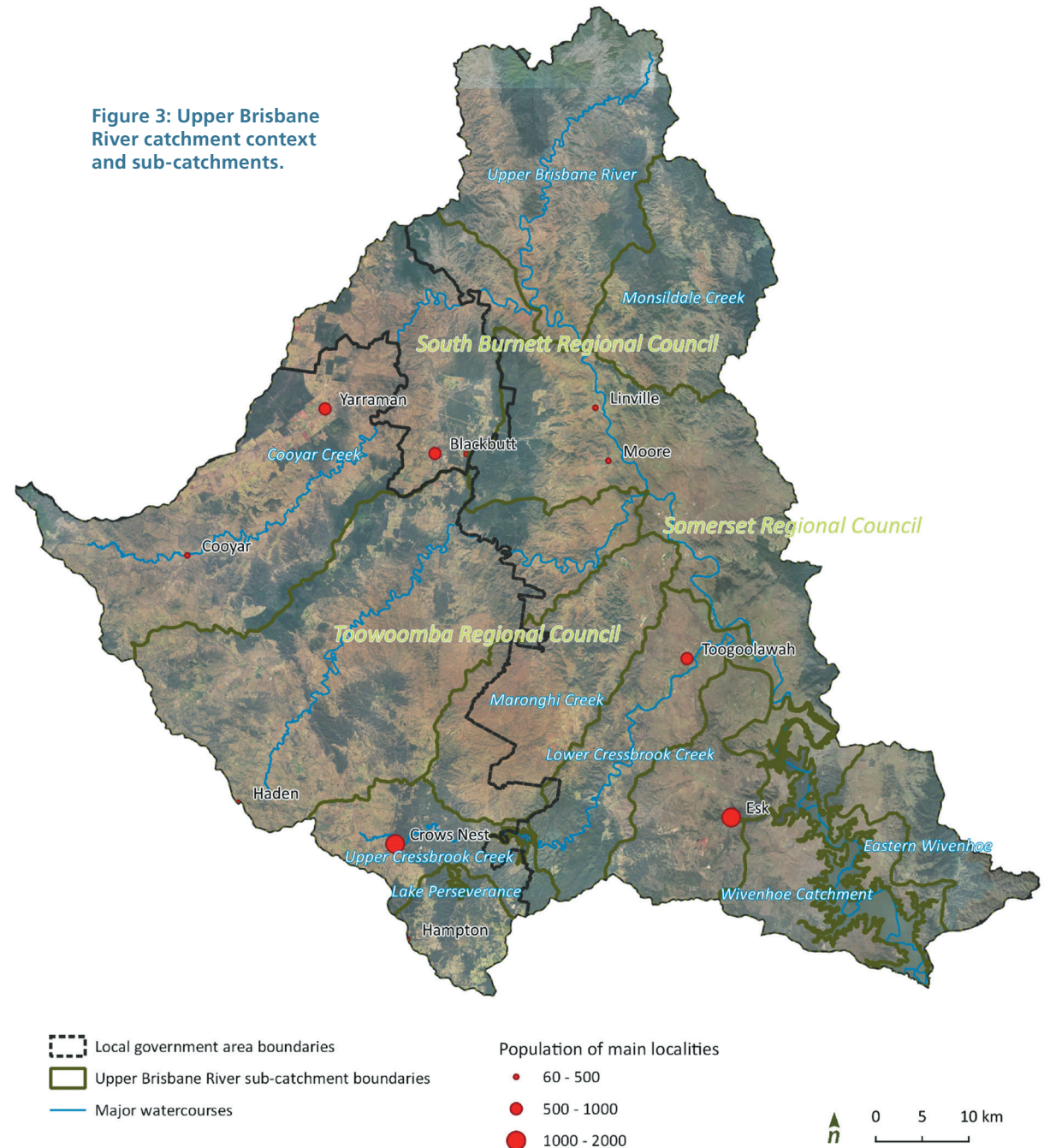
The Upper Brisbane River catchment is located approximately 40 km north-west of Brisbane in SEQ and covers an area of approximately 5,470 km² (Figure 3). It is located within the SBRC, TRC and SRC LGAs. The Brisbane River is impounded by Wivenhoe Dam.

The main waterway in the Upper Brisbane River catchment is the Brisbane River, as well as its main tributaries, including Cressbrook Creek, Emu Creek and Cooyar Creek. The population within the Upper Brisbane River catchment is approximately 6,150. The largest population centres are located around Esk and Crows Nest.

Climate

Rainfall is relatively low in this catchment when compared with the Stanley River Catchment. There are distinct wet and dry seasons and most of the rainfall occurs during summer and autumn with high inter- and intra-annual variability. Rainfall is highest during the summer months and mean monthly rainfall ranges from 100 to 120 mm.

Figure 3: Upper Brisbane River catchment context and sub-catchments.



Landscape processes

Geomorphology

The geomorphology of the Upper Brisbane River upstream of Lake Wivenhoe is largely a function of the underlying geology and hydrological regime. The mid to upper reaches of the catchment are relatively steep as the streams are typically confined or significantly confined by bedrock or resistant terraces. This results in relatively stable streambanks, with some scope for lateral adjustment as some of these reaches exhibit minor to moderate instabilities. Streams in the lower catchment are confined by resistant terraces.

The Upper Brisbane River is deeply entrenched and bounded by steep, resistant banks of terrace deposits, forming a macrochannel. This morphology shows structural resilience and significant lateral adjustment is unlikely. However, localised bank erosion can result in significant sediment loads due to the height of the banks. Within the macrochannel, there is a complex arrangement of geomorphic units, including multiple inset depositional units (e.g., benches, bars, etc.). The sediment in these inset units is mobilised during flows and transported out of the system or redeposited further downstream.

Riparian condition

The Upper Brisbane River catchment has largely been cleared for grazing, forestry, and agriculture. This has resulted in an overall poor to very poor riparian vegetation condition.

Land use and conservation

Land use

The dominant land use practice is production from relatively natural environments occupying approximately 80% of land.

There are several water treatment plants (WTPs) in the catchment that receive raw water from the Upper Brisbane River. These WTPs are located at Wivenhoe, Esk and Linville. Additionally, water released from Wivenhoe Dam supplies WTPs via the Mid Brisbane River.

Conservation values

Approximately 16% of the total catchment area is covered by protected areas such as national parks and state forests. This includes D'Aguilar, Wrattens and Crows Nest National Parks. Other significant protected areas are nature refuges, including the Somerset and Wivenhoe Dams Nature Refuge, Rathburnie Estate Nature Refuge and Pine Cliffs Nature Refuge. Approximately 12% of the catchment area contains wetlands that offer an important habitat for a range of native fish, amphibians, birds and mammals.

Significance of water resources

Wivenhoe Dam is strategically important as it is the main water storage unit for SEQ. The dam was built in the late

1970s/early 1980s in response to major flooding in 1974. Its normal storage capacity is 1.165 million Megalitres, which is considered Full Supply Level (FSL) for drinking water purposes. It plays a major role in flood mitigation and storage and is gated to allow for controlled water releases during heavy rainfall. Wivenhoe Dam also has high recreation value to local residents, those within the greater SEQ region and tourists.

Key catchment assets and threats

The catchment includes a number of key natural and built assets which were identified as being of regional significance and which are at threat in the context of the four goals of the Resilient Rivers Regional Strategy. A summary of these assets and threats is provided below. (Table 2).

Table 2: The threats and risks to assets and values in the Upper Brisbane River catchment

ASSET/VALUE	THREATS TO ASSET	SOURCE OF THREATS/CONTRIBUTING FACTORS	AGGREGATED RISK TO ASSET
ECONOMIC			
Water for stock, irrigation and domestic purposes	<ul style="list-style-type: none"> ■ Diminished supply ■ Decline in water quality 	<ul style="list-style-type: none"> ■ Changing climate ■ Seasonal climate variability ■ Increasing salinity 	Moderate-high
SEQ's water supply	<ul style="list-style-type: none"> ■ Diminished supply ■ Decline in water quality 	<ul style="list-style-type: none"> ■ Changing climate ■ Bushfires ■ Catchment vegetation clearing ■ Catchment management resources ■ Impacts of historic sand and gravel extraction ■ Sewerage networks 	Moderate-high
Local tourism	<ul style="list-style-type: none"> ■ Diminished supply ■ Decline in water quality 	<ul style="list-style-type: none"> ■ Changing climate ■ Major flooding/drought ■ Bushfire ■ Seasonal climate variability ■ Weeds and feral animals ■ Catchment management resources ■ Decline in numbers in community groups ■ Indigenous values not adequately understood/ documented 	Moderate
Agricultural land	<ul style="list-style-type: none"> ■ Diminished supply ■ Decline in water quality ■ Land use changes 	<ul style="list-style-type: none"> ■ Changing climate ■ Major flooding/drought ■ Bushfire ■ Urban expansion/population growth ■ Weeds and feral animals ■ Conversion of farmland to rural living/hobby farms ■ Coal seam gas exploration/extraction ■ Catchment management resources ■ Decline in numbers in community groups ■ Changing demographics ■ Legislative changes 	High

ASSET/VALUE	THREATS TO ASSET	SOURCE OF THREATS/CONTRIBUTING FACTORS	AGGREGATED RISK TO ASSET
SOCIAL			
Scenic amenity / recreation	<ul style="list-style-type: none"> ■ Decline in water quality ■ Diminished water supply 	<ul style="list-style-type: none"> ■ Changing climate ■ Major flooding/drought ■ Bushfire ■ Seasonal climate variability ■ Weeds and feral animals ■ Catchment management resources 	Moderate
Fish stocks	<ul style="list-style-type: none"> ■ Decline in water quality ■ Diminished water supply 	<ul style="list-style-type: none"> ■ Changing climate ■ Major drought ■ Dams, weirs and other barriers to fish movement ■ Bushfire ■ Weeds and feral animals ■ Catchment management resources 	Moderate
Indigenous culture and stewardship	<ul style="list-style-type: none"> ■ Diminished leadership ■ Loss of cultural heritage sites ■ Disengagement with community 	<ul style="list-style-type: none"> ■ Changing climate ■ Major flooding/drought ■ Bushfire ■ Catchment vegetation clearing ■ Weeds and feral animals ■ Catchment management resources ■ Indigenous values not adequately understood/ documented ■ Decline in numbers in community groups 	Moderate
Liveability	<ul style="list-style-type: none"> ■ Diminished leadership ■ Disengagement with community ■ Loss of valued sites 	<ul style="list-style-type: none"> ■ Changing climate ■ Major flooding/drought ■ Bushfires ■ Weeds and feral animals ■ Catchment management resources ■ Decline in numbers in community groups 	Moderate-high

ASSET/VALUE	THREATS TO ASSET	SOURCE OF THREATS/CONTRIBUTING FACTORS	AGGREGATED RISK TO ASSET
ENVIRONMENTAL			
Water to sustain aquatic and terrestrial ecosystems	<ul style="list-style-type: none"> ■ Decline in water quality ■ Diminished water supply 	<ul style="list-style-type: none"> ■ Over extraction/allocation of water ■ Changing climate ■ Bushfires ■ Intensive agriculture ■ Sewerage network and on-site wastewater treatment plants ■ Weeds and feral animals ■ Catchment management resources 	Moderate
Riparian vegetation	<ul style="list-style-type: none"> ■ Loss of riparian vegetation ■ Decline in water quality 	<ul style="list-style-type: none"> ■ Dams, weirs and other barriers to fish movement ■ Bushfire ■ Catchment vegetation clearing ■ Cattle grazing ■ Weeds and feral animals ■ Catchment management resources ■ Decline in numbers in community groups ■ Legislation changes impacting agricultural practices 	Moderate
Remnant vegetation and endangered ecosystems	<ul style="list-style-type: none"> ■ Diminished ecosystem value ■ Decline in water quality 	<ul style="list-style-type: none"> ■ Over allocation/extraction of water ■ Bushfire ■ Catchment clearing ■ Cattle grazing ■ Weeds and feral animals ■ Catchment management resources ■ Decline in numbers in community groups ■ Legislation changes impacting agricultural practices 	Moderate
Wildlife corridors / flora and fauna	<ul style="list-style-type: none"> ■ Diminished ecosystem value ■ Decline in water quality 	<ul style="list-style-type: none"> ■ Changing climate ■ Bushfire ■ Major flooding ■ Cattle grazing ■ Weeds and feral animals ■ Catchment management resources ■ Decline in numbers in community groups ■ Legislation changes impacting agricultural practices 	Moderate

Stanley River Catchment

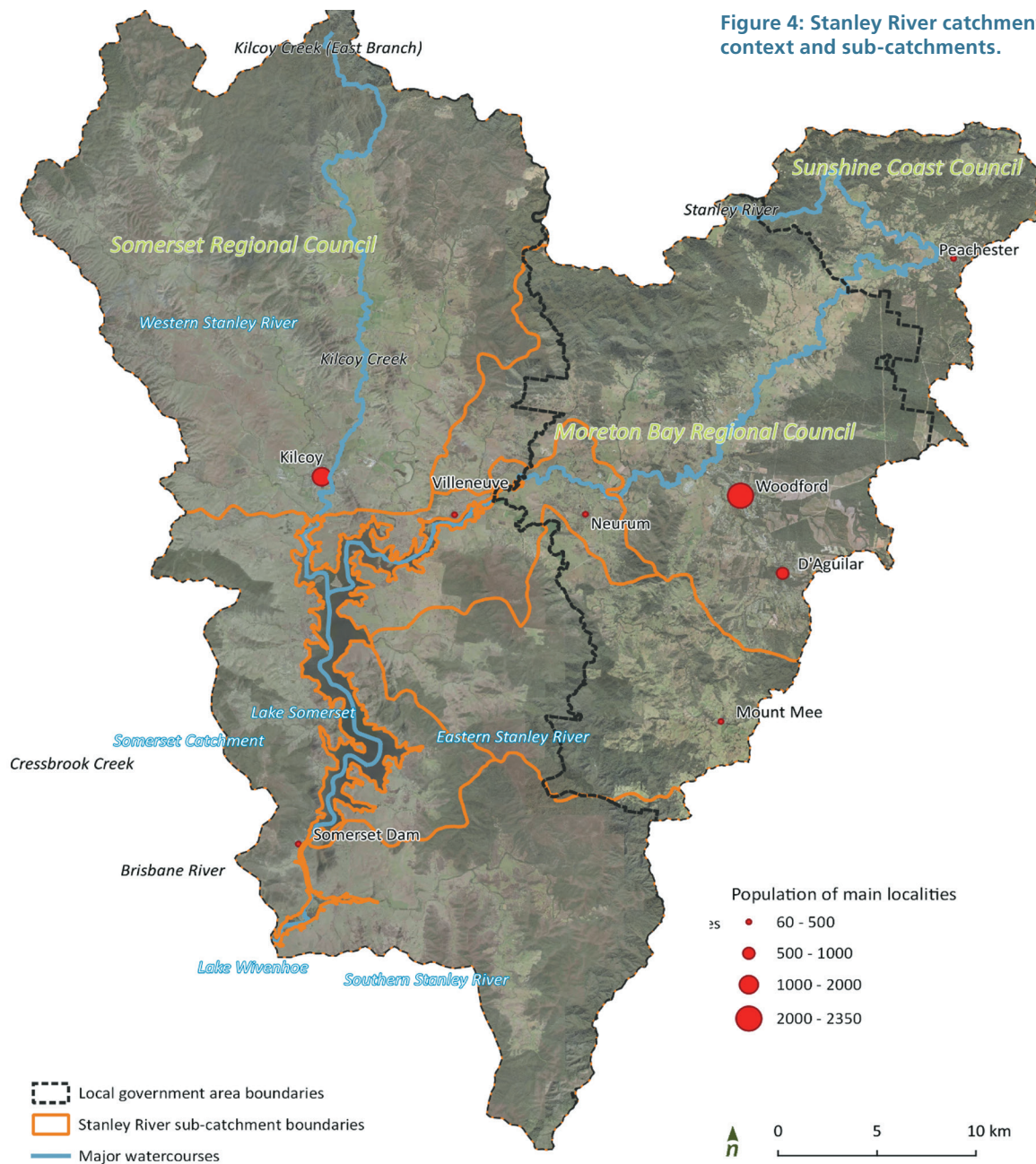
Catchment overview

The Stanley River catchment is located approximately 45 km north-north-west of Brisbane in SEQ and covers an area of approximately 1,500 km² (Figure 4). It is located within the SRC, SCC and MBRC LGAs. The main waterway in the catchment is the Stanley River, with the major tributaries of Kilcoy Creek, Reedy Creek, Sheep Station Creek, Sandy Creek, Stoney Creek, Delaney Creek and Neurum Creek. The headwaters of the Stanley River flow south into Somerset Dam where water is then released into Wivenhoe Dam.

The catchment yields up to 87% of the water that is delivered to the Mount Crosby treatment plant on the Mid Brisbane River. The population within the catchment is estimated to be 6,000. The largest population centre is Woodford, followed by Kilcoy.

Climate

Rainfall between the upper and lower reaches of the catchment is highly variable. It is highest in the upper reaches of the Stanley River and Kilcoy Creek, where the average monthly rainfall ranges from 150 to 250 mm during the summer months. Rainfall is lowest in the Lake Somerset and Southern Stanley subcatchments. Mean monthly rainfall during the summer months ranges from 120 to 140 mm.



Landscape processes

Geomorphology

Streams in the upper reaches are predominantly confined and tend to be stable with limited potential for lateral adjustment. Confined streams emerge onto a partly confined valley setting with alluvial floodplain development. Mid-reaches of the Stanley River catchment are exhibiting small sections of minor to major instability. In the lower catchment, streams flow unconfined over Holocene floodplains. Channel widening occurs on the lower floodplains, along with the downstream progression of meander bends and channel shortening through meander cut-offs.

Riparian condition

The latest reports suggests that there is very good riparian cover in the upper reaches, which reduces to a fairer condition further down the catchment. Reduced riparian cover in the mid to lower reaches is largely a result of land clearing for cattle grazing.

Land use and conservation

Land use

Over half (820 km²) of the total catchment area is used for production from relatively natural environments. Conservation and natural environments are the next most common land use practice, which occupies approximately 510 km² or 33% of the catchment

area. Most of this land is used for national parks and residual native cover. Minor land uses include intensive uses (residential, intensive animal production), production from dryland agriculture and plantations, water (reservoir/dam) and production from irrigated agriculture and plantations. Residential land use covers approximately 4% (65 km²) of the Stanley River catchment. Rural living is the most common type of residential land use, followed by urban residential.

Lake Somerset on Somerset Dam is the major built asset in the catchment. There are several boat ramps around the dam to allow access to the waterways.

There are several wastewater treatment plants and a number of on-site wastewater treatment systems in the catchment.

Conservation values

The Stanley River catchment has high conservation value, with around 25% of the catchment covered by protected areas. These protected areas include Conondale, D'Aguiar and Bellthorpe National Parks, and Beerburum West State Forest. In addition, 8% that is covered by remnant vegetation is endangered or of concern. Less than 1% of the catchment contains nature refuges; the most significant of these are Gaia Nature Refuge and Somerset and Wivenhoe Dams Nature Refuge. Approximately 12% of the combined catchment area contains wetlands.

Significance of water resources

The majority of the streams in the Stanley River catchment flow unimpeded to the confluence in the lower reaches at Lake Somerset. Construction of Somerset Dam was completed in 1959 for the purpose of flood mitigation and water storage for the region. Full capacity of Somerset Dam is 379,849 ML. The dam is also the site of a small hydroelectricity power station. The rainfall generated in this catchment is critical to downstream receiving waters as not as much rainfall occurs in the Brisbane River catchment. Somerset Dam also has high recreational value for the region. Somerset Dam is a key location for fishing within the SEQ region.

Key catchment assets and threats

The catchment includes a number of key natural and built assets which were identified as being of regional significance and which are at threat in the context of the four goals of the Resilient Rivers Regional Strategy. A summary of these assets and threats are provided below (Table 3)

Table 3: The threats and risks to assets and values in the Stanley River catchment

ASSET/VALUE	THREATS TO ASSET	SOURCE OF THREATS/CONTRIBUTING FACTORS	AGGREGATED RISK TO ASSET
ECONOMIC			
Water for stock, irrigation and domestic purposes	<ul style="list-style-type: none"> ■ Diminished supply ■ Decline in water quality 	<ul style="list-style-type: none"> ■ Changing climate ■ Increasing salinity ■ Seasonal climate variability ■ Catchment vegetation clearing ■ Unsealed roads ■ Coal seam gas exploration/extraction ■ Invasion of weeds and feral animals ■ Catchment management resources ■ Decline in numbers in community groups ■ Bushfire ■ Major drought/flood 	Moderate
SEQ's water supply	<ul style="list-style-type: none"> ■ Diminished supply ■ Decline in water quality 	<ul style="list-style-type: none"> ■ Over allocation/extraction of water ■ Changing climate ■ Seasonal climate variability ■ Intensive agriculture ■ Sewerage network and on-site WWTP ■ Invasion of weeds and feral animals ■ Catchment management resources ■ Increased tourism and recreation ■ Due to age, STPs are not designed to remove nutrients 	Moderate
Local tourism	<ul style="list-style-type: none"> ■ Diminished supply ■ Decline in water quality 	<ul style="list-style-type: none"> ■ Changing climate ■ Major flooding/drought ■ Bushfire ■ Seasonal climate variability ■ Invasion of weeds and feral animals ■ Catchment management resources ■ Decline in numbers in community groups 	Moderate
Agricultural land	<ul style="list-style-type: none"> ■ Diminished supply ■ Decline in water quality ■ Land use changes 	<ul style="list-style-type: none"> ■ Changing climate ■ Major flooding/drought ■ Bushfire ■ Urban expansion/population growth ■ Invasion of weeds and feral animals ■ Conversion of farmland to rural living/hobby farms ■ Catchment management resources ■ Decline in numbers in community groups ■ Legislative changes 	High

ASSET/VALUE	THREATS TO ASSET	SOURCE OF THREATS/CONTRIBUTING FACTORS	AGGREGATED RISK TO ASSET
SOCIAL			
Scenic amenity / recreation	<ul style="list-style-type: none"> ■ Decline in water quality ■ Diminished water supply 	<ul style="list-style-type: none"> ■ Changing climate ■ Major flooding/drought ■ Bushfire ■ Seasonal climate variability ■ Invasion of weeds and feral animals ■ Catchment management resources 	Moderate
Fish stocks	<ul style="list-style-type: none"> ■ Decline in water quality ■ Diminished water supply 	<ul style="list-style-type: none"> ■ Changing climate ■ Major drought ■ Dams, weirs and other barriers to fish movement ■ Bushfire ■ Weeds and feral animals ■ Catchment management resources 	Moderate
Indigenous culture and stewardship	<ul style="list-style-type: none"> ■ Diminished leadership ■ Loss of cultural heritage sites ■ Disengagement with community 	<ul style="list-style-type: none"> ■ Changing climate ■ Major flooding/drought ■ Bushfire ■ Catchment vegetation clearing ■ Weeds and feral animals ■ Catchment management resources ■ Indigenous values not adequately understood/ documented ■ Decline in numbers in community groups 	Moderate
Liveability	<ul style="list-style-type: none"> ■ Diminished leadership ■ Disengagement with community ■ Loss of valued sites 	<ul style="list-style-type: none"> ■ Changing climate ■ Major flooding/drought ■ Bushfires ■ Weeds and feral animals ■ Catchment management resources ■ Decline in numbers in community groups 	Moderate-high

ASSET/VALUE	THREATS TO ASSET	SOURCE OF THREATS/CONTRIBUTING FACTORS	AGGREGATED RISK TO ASSET
ENVIRONMENTAL			
Water to sustain aquatic and terrestrial ecosystems	<ul style="list-style-type: none"> ■ Decline in water quality ■ Diminished water supply 	<ul style="list-style-type: none"> ■ Over extraction/allocation of water ■ Changing climate ■ Bushfires ■ Intensive agriculture ■ Sewerage network and on-site wastewater treatment plants ■ Weeds and feral animals ■ Catchment management resources 	Moderate
Riparian vegetation	<ul style="list-style-type: none"> ■ Loss of riparian vegetation ■ Decline in water quality 	<ul style="list-style-type: none"> ■ Dams, weirs and other barriers to fish movement ■ Catchment vegetation clearing ■ Cattle grazing ■ Weeds and feral animals ■ Catchment management resources ■ Decline in numbers in community groups ■ Legislation changes impacting agricultural practices 	Moderate
Remnant vegetation and endangered ecosystems	<ul style="list-style-type: none"> ■ Diminished ecosystem value ■ Decline in water quality 	<ul style="list-style-type: none"> ■ Over allocation/extraction of water ■ Catchment clearing ■ Cattle grazing ■ Weeds and feral animals ■ Catchment management resources ■ Decline in numbers in community groups ■ Legislation changes impacting agricultural practices 	Moderate
Wildlife corridors / flora and fauna	<ul style="list-style-type: none"> ■ Diminished ecosystem value ■ Decline in water quality 	<ul style="list-style-type: none"> ■ Changing climate ■ Major flooding ■ Cattle grazing ■ Weeds and feral animals ■ Catchment management resources ■ Decline in numbers in community groups ■ Legislation changes impacting agricultural practices 	Moderate

3. Action Plan Upper Brisbane and Stanley Rivers Catchments

Actions have been developed with the input of stakeholders to address the threats to the catchment assets and values.

The actions to address the threats within the Upper Brisbane and Stanley Rivers catchments are summarised in Table 4. These actions have been prioritised through the risk assessment including stakeholder feedback and all the other information sources that have been incorporated into the project.

Table 4 outlines each action, which threat is addressed by the action, an implementation pathway, locations for the action (where they are known), timeframe for completion, priority for the action and lead stakeholder agency for each action.

A multi-criteria analysis (MCA) was applied to the outcomes of the risk analysis as a tool to filter the actions, to help set management action priorities.

The MCA used an evaluation framework comprising the RRI objectives (how many of the four RRI objectives would a given action meet?) and the following management action implementation criteria:

- Likely project cost effectiveness
- Integration with existing activities
- Partnerships exist to implement project
- Data availability
- Implementation ease.

The final prioritisation of management actions from the MCA was then used within the action plan for the combined catchments. The top priority management action within Table 4 is to strengthen institutional arrangements at a catchment-scale level (Action 1).



Table 4: Risk Treatment Plan. Actions to address threats in the Upper Brisbane and Stanley Rivers catchments.

ACTION	THREATS ADDRESSED	RATIONALE	MCA PRIORITY	ACTIONS (IMPLEMENTATION PATHWAY)	PRIORITY LOCATIONS	LEAD RESPONSIBILITY AND TIMEFRAME
<p>1. Institutional arrangements Strengthen institutional arrangements at a catchment-scale level.</p>	<ul style="list-style-type: none"> ■ Catchment management resources ■ Uncoordinated catchment management 	<p>More effort required to coordinate management and investment. This will assist overall implementation of the CAP and ensure the greatest return on the use of public funds and the strongest economic, social and environmental outcomes for the region.</p>	<p>1</p>	<ul style="list-style-type: none"> ■ Foster collaboration to bring about a coordinated and strategic approach to catchment management in South East Queensland, including facilitating regular stakeholder workshops/engagement to present on planned catchment works and outcomes of completed works ■ Continue advocacy for an annual investment of up to \$30 million across the three levels of government, including consideration of current and emerging funding programs to effectively protect the region's catchments ■ Develop/coordinate a data management group and coordinator, and centralised database of projects implemented on the ground to enable visibility between stakeholders of works implemented and sharing of knowledge and data 	<p>Catchment wide</p>	<p>CoMSEQ (all actions, HLW supporting) 1 – 2 years</p>

ACTION	THREATS ADDRESSED	RATIONALE	MCA PRIORITY	ACTIONS (IMPLEMENTATION PATHWAY)	PRIORITY LOCATIONS	LEAD RESPONSIBILITY AND TIMEFRAME
<p>2. Best practice management and partnerships Improve climate resilience, financial viability, and minimise soil and other pollutant loads to creeks.</p>	<ul style="list-style-type: none"> Land use practice (Cattle grazing/intensive agriculture) 	<ul style="list-style-type: none"> Opportunity to continue existing and promote new on-farm projects Partnerships with rural landholders are key to provide education on, and implementation of best practice management, presenting potential for ongoing catchment improvement 	5	<ul style="list-style-type: none"> Collaborate with other organisations to support the ongoing development and implementation of a Best Management Practice (BMP) program for the cattle grazing industry to improve the skills, knowledge and capacity of landholders to increase the adoption of grazing and land management practices, which enhance soil health, land condition, native vegetation and water quality in identified priority areas within South East Queensland 	<p>Upper Brisbane River – from Wivenhoe Dam to Colinton, Linville</p> <p>Stanley River – Kilcoy, Somerset</p>	<p>DAF (HLW and Seqwater supporting)</p> <p>1 – 6 years</p>
				<ul style="list-style-type: none"> Utilise new and existing tools to implement BMP to improve the skills, knowledge and capacity of landholders to monitor and increase the adoption of grazing and land management practices, including the use of FORAGE system, StockTake app (to be released 2021) and Land Condition Assessment Tool (LCAT) 	<p>Upper Brisbane River – from Wivenhoe Dam to Colinton, Linville</p> <p>Stanley River – Kilcoy, Somerset</p>	<p>DAF, DES (HLW and Seqwater supporting)</p> <p>1 – 6 years</p>
				<ul style="list-style-type: none"> Work with landholders to assist with riparian vegetation recovery and prioritise macrochannels 	<p>Upper Brisbane River – Wivenhoe Dam tailwaters</p>	<p>Seqwater (HLW supporting)</p> <p>1 – 6 years</p>
				<ul style="list-style-type: none"> Fund the implementation of targeted land management extension program in sub-catchments with high incidence of gully erosion (supported by DAF LCAT) 	<p>Upper Brisbane River – landholders in Upper Maronghi, Upper Ivory, Mid and Lower Emu, Neara and Wivenhoe West sub-catchments, and above Linville</p>	<p>DAF, HLW (Seqwater supporting)</p> <p>1 – 3 years</p>
				<ul style="list-style-type: none"> Work with local landholders to trial an approach of stewardship payments to promote the reduction of grazing pressure and reduce impacts directly on waterways 	<p>Locations based on expression of interest process</p>	<p>Seqwater (HLW supporting)</p> <p>1 – 4 years</p>

ACTION	THREATS ADDRESSED	RATIONALE	MCA PRIORITY	ACTIONS (IMPLEMENTATION PATHWAY)	PRIORITY LOCATIONS	LEAD RESPONSIBILITY AND TIMEFRAME
3. Sedimentation and erosion Promote activities which minimise soil loss.	<ul style="list-style-type: none"> ■ Channel erosion ■ Damage to assets infrastructure ■ Diffuse hillslope and gully erosion ■ Poor floodplain/cropping management ■ Landslides ■ Sedimentation of dams, weirs and channel bed morphology 	<ul style="list-style-type: none"> ■ Historical land clearing and land use change of hillslopes, floodplains and riparian zones has resulted in greater soil loss and flood damage (e.g. vegetation and floodplain stripping) 	4	<ul style="list-style-type: none"> ■ Assess the contribution of gullies and prioritise locations for investment based on findings from the Integrated Sediment Assessment 	Highly gullied sub-catchments: Stanley River catchment – Upper Stanley, Somerset, Eastern Stanley Upper Brisbane – Brisbane River in Moore, Maronghi Creek, Upper Cressbrook	Seqwater (HLW supporting) 1 – 5 years
				<ul style="list-style-type: none"> ■ Implement targeted sediment reduction interventions at priority locations (one per year for the next five years) through on-ground works, including revegetation, fencing, earthworks and structural protection 	Areas around water offtakes for water treatment plants – Kilcoy, Esk, Linville and Somerset, and priority channel erosion reaches in the catchments	
				<ul style="list-style-type: none"> ■ Undertake an assessment of sites where floodplain reengagement could provide help to control sedimentation and undertake a trial of the use of this methodology 	Catchment wide	
				<ul style="list-style-type: none"> ■ Work with industry, agencies and the community to develop a response on the impact of and response to gravel extraction and develop a rehabilitation plan of action to help address ongoing impacts 	Harlin and Gregors Creek area (not including state-owned quarry)	

ACTION	THREATS ADDRESSED	RATIONALE	MCA PRIORITY	ACTIONS (IMPLEMENTATION PATHWAY)	PRIORITY LOCATIONS	LEAD RESPONSIBILITY AND TIMEFRAME
4. Riparian vegetation Assist riparian vegetation recovery in appropriate locations, and look to protect vegetation including areas beyond the riparian zone, to provide an ecosystem service.	<ul style="list-style-type: none"> ■ Threats to biodiversity ■ Catchment vegetation clearing ■ Erosion and water quality impacts ■ Channel resilience to floods ■ Buffer zone for pathogen capture 	<ul style="list-style-type: none"> ■ Poor creek bank condition resulting from a variety of impacts, including flood damage, vegetation clearing, weed overgrowth, damaged stock fences and limitations on resources (landholder time and funds) 	2	<ul style="list-style-type: none"> ■ Undertake monitoring and evaluation of existing protected areas and consider expanding protected areas through a range of available mechanisms and programs. 	Catchment wide, including biodiversity corridors. Examples of protected areas include: Conondale Range Aggregation (wetland), Gaia Nature Refuge, Somerset Nature Refuge, Wivenhoe Nature Refuge, Rathburnie Estate Nature Refuge, and Pine Cliffs Nature Refuge	State Government (Seqwater and local councils supporting) 1 – 10 years
				<ul style="list-style-type: none"> ■ Establish a partnership program to coordinate assistance through grants available to small and medium landholders for riparian management, focussing on areas that have very poor riparian vegetation cover (less than 25%), maintaining existing riparian vegetation, and promote livestock exclusion fencing 	Areas around water offtakes for water treatment plants – Kilcoy, Esk, Somerset and Linville	Seqwater (HLW supporting) 1 – 5 years
				<ul style="list-style-type: none"> ■ Undertake works to widen the riparian vegetation above Somerset Dam to prepare for ongoing channel widening due to bed erosion 	Lower Stanley River, Neurum Creek (above Somerset Dam)	Seqwater (HLW supporting) 1 – 5 years
				<ul style="list-style-type: none"> ■ Enhance vegetation near major erosion repair site 	Upper Brisbane River at Harlin	HLW (Seqwater supporting) 1 – 3 years

ACTION	THREATS ADDRESSED	RATIONALE	MCA PRIORITY	ACTIONS (IMPLEMENTATION PATHWAY)	PRIORITY LOCATIONS	LEAD RESPONSIBILITY AND TIMEFRAME
5. Pest management Maintain existing riparian vegetation health. Ensure coordinated weed control and revegetation.	<ul style="list-style-type: none"> ■ Reduction in the extent or condition of vegetation in riparian areas ■ Reduction in the values of the core bushland and biodiversity corridors and smaller scale habitat linkages 	<ul style="list-style-type: none"> ■ Pest species can cause a reduction in the services riparian areas provide (erosion protection, flood mitigation, water filtration, groundwater recharge) ■ Weeds in riparian zones are a threat to endangered ecosystems 	3	<ul style="list-style-type: none"> ■ Collaborate to build on the program of current works to undertake extensive strategic riparian weed control (Cats Claw and Madeira Vine) 	Main channels in the Upper Brisbane and Stanley River catchments and extent to other tributaries as resources allow – focus on endangered Lowland Riparian Forest	Seqwater (HLW, MBRC and SRC supporting) 1 – 10 years
				<ul style="list-style-type: none"> ■ Implement a program to address emerging Madeira Vine infestations 	Upper Stanley River near Peachester	
				<ul style="list-style-type: none"> ■ Collaborate to undertake mass biological control release into main channel and tributary infestations 	Main channel and tributary infestations, including Cressbrook, Ivory, Maronghi, and Emu Creeks, and others mapped by Seqwater	

ACTION	THREATS ADDRESSED	RATIONALE	MCA PRIORITY	ACTIONS (IMPLEMENTATION PATHWAY)	PRIORITY LOCATIONS	LEAD RESPONSIBILITY AND TIMEFRAME
6. Water quality Assess levels of pollution from point sources by working with owners of sewerage networks, effluent systems and septic systems to deliver potential system improvements.	<ul style="list-style-type: none"> ■ Sewerage networks ■ Dairy effluent systems ■ Domestic septic systems 	<ul style="list-style-type: none"> ■ Various contaminants exceed the treatment capacity of the WTPs leading to a disruption or increased cost to water supply (note: due to age, STPs are not designed to remove nutrients, therefore adoption of industry best practice required) ■ Risk to drinking water security for Linville, Esk, Kilcoy and Somerset ■ Impact on aquatic ecology and ecosystem services provided by waterways 	7	<ul style="list-style-type: none"> ■ Undertake focussed monitoring and works to identify and manage source water quality risks from onsite wastewater systems and sewerage networks to help protect local drinking water supply 	Upper Brisbane River – Esk, Toogoolawah, Linville	Seqwater with SRC 1 – 5 years
				<ul style="list-style-type: none"> ■ <i>Subject to completion of above action:</i> Further assess risks to water quality and develop prioritised improvement actions, including adopting industry best practice, required for wastewater management (sewerage network) 	Stanley River – Kilcoy, Woodford	Urban Utilities / Unity Water 1 – 10 years
				<ul style="list-style-type: none"> ■ Work with industry to advocate for the adoption of best practice management at intensive agricultural facilities within the catchment to protect water quality 	Intensive agricultural facilities, including Esk, Wivenhoe, Crows Nest, Emu Creek, Haden, Toogoolawah	State agencies (Seqwater, HLW supporting) 1 – 5 years

ACTION	THREATS ADDRESSED	RATIONALE	MCA PRIORITY	ACTIONS (IMPLEMENTATION PATHWAY)	PRIORITY LOCATIONS	LEAD RESPONSIBILITY AND TIMEFRAME
<p>7. Community education Promote behavioural change.</p>	<ul style="list-style-type: none"> ■ Climate related threats ■ Catchment management resources ■ Invasion of weeds and feral animals ■ Catchment vegetation clearing, including unauthorised burning, damage from recreation 	<ul style="list-style-type: none"> ■ Education programs regarding catchment health will help to promote behavioural change and assist in catchment management 	11	<ul style="list-style-type: none"> ■ Increase community and landholder awareness about the importance of catchment issues such as managing riparian weeds and other pest species, stock control and wastewater management through educational facilities, courses and workshops, and establish citizen science-based monitoring 	Catchment wide	Seqwater, HLW 1 – 4 years
<p>8. Water resources planning Ensure adequate provisions are incorporated into any updates/ reviews of the relevant environmental water flow requirements detailed in the Moreton Water Resource Plan.</p>	<ul style="list-style-type: none"> ■ Insufficient environmental flows 	<ul style="list-style-type: none"> ■ Improved flows will derive a range of improved waterway health outcomes 	9	<ul style="list-style-type: none"> ■ Continue engagement/consultation with the Department around the status of any future planning process and advocate for improved provisions around environmental flow requirements 	Stanley River catchment	DRDMW

ACTION	THREATS ADDRESSED	RATIONALE	MCA PRIORITY	ACTIONS (IMPLEMENTATION PATHWAY)	PRIORITY LOCATIONS	LEAD RESPONSIBILITY AND TIMEFRAME
<p>9. Climate resilience Improve resilience during drought, flood and bushfire events.</p>	<ul style="list-style-type: none"> Climate related threats 	<ul style="list-style-type: none"> Deterioration resulting from climate change impacts: declining water quality, physical habitat destruction and altered flow regimes To improve the climate resilience of the region 	<p>6</p>	<ul style="list-style-type: none"> Undertake a hazard threat analysis to identify key catchment values at risk from a changing climate, focusing on riparian zones which are becoming more vulnerable to wildfire (management buffers for protection) Include the latest and agreed climate change projections consistently into assessments, planning and modelling for catchment work to be undertaken, including restoration design options, and water supply and sewerage services resilience 	<p>Catchment wide</p>	<p>State agencies 1 – 3 years</p> <p>Seqwater, local Councils, Urban Utilities, Unity Water</p>
<p>10. Catchment investment and human resources Assess current capacity within the community to establish current baseline and future needs.</p>	<ul style="list-style-type: none"> Catchment management resources 	<ul style="list-style-type: none"> Partnerships across agencies and with a variety of stakeholders is key to the success of the Resilient Rivers Initiative 	<p>8</p>	<ul style="list-style-type: none"> Undertake a risk assessment to identify current adequacy of investment in community catchment management Review the capacity of existing catchment management groups and their members, and identify the possible reasons for diminished capacity Establish a funding mechanism through partnerships with catchment management groups to share knowledge, expertise and leverage budgets to improve waterway management outcomes across the catchment 	<p>Catchment wide</p>	<p>CoMSEQ (Seqwater, local Councils, Qld Government and HLW supporting) 1 – 5 years</p>

ACTION	THREATS ADDRESSED	RATIONALE	MCA PRIORITY	ACTIONS (IMPLEMENTATION PATHWAY)	PRIORITY LOCATIONS	LEAD RESPONSIBILITY AND TIMEFRAME
<p>11. Impacts to fisheries Undertake a waterway assessment to identify key fish habitats and barriers to habitat continuity.</p>	<ul style="list-style-type: none"> ■ The risk of movement of fish species being restricted by weirs culverts and dams 	<ul style="list-style-type: none"> ■ Address impacts on habitat connectivity and altered flow regimes to: <ul style="list-style-type: none"> • Improve connectivity and native fish resilience • Allow important commercial, recreational and indigenous fishery species to complete life cycle ■ Improve waterway health 	12	<ul style="list-style-type: none"> ■ Identify key fish habitats and barriers to habitat continuity ■ Facilitate and advise on the assessment and approval for restoration works to remediate priority barriers and maintain or improve waterway ecology; relevant applicants should seek pre-lodgement advice through the State Assessment and Referral Agency (SARA) on any requirements as they relate to works within waterways 	<p>Upper Brisbane River – McCauley Weir, Pukallus Weir, Yarraman Weir, Cressbrook Creek Weir, Cressbrook Creek Dam, Lower Cressbrook Creek Weir, Perseverance Creek Dam</p> <p>Stanley River – Kilcoy Weir, Woodford Weir, Somerset Dam, Oaky Creek</p>	<p>DAF</p> <p>1 – 5 years</p>
<p>12. Recreational areas Manage recreational areas in accordance with stakeholder frameworks.</p>	<ul style="list-style-type: none"> ■ Dams and weirs ■ Changes in land use practices, including urban expansion/ population growth 	<ul style="list-style-type: none"> ■ Recreational activities contribute contaminants into the raw water supply and overall waterway health 	10	<ul style="list-style-type: none"> ■ Identify, assess and prioritise remediation of high use informal recreation areas ■ Prepare a recreation management plan to achieve desired level of service for priority sites which includes investigating options to improve management of pathogen and sediment sources 	<p>Local Council recreation sites</p>	<p>Somerset Regional Council (Seqwater Supporting)</p> <p>1 – 5 years</p>

4. Review

Emerging plans and strategies

There are several key projects which are currently underway which will identify actions which should be considered in the future review of the CAP including:

- Seqwater source protection programs and partnerships
- South East Queensland Natural Resource Management Plan
- SEQ Regional Plan – *ShapingSEQ*
- Somerset Regional Council Corporate Plan
- Somerset Region Planning Scheme
- Building Catchment Resilience Project – underway with Griffith University.

Links with other catchment areas

While the CAP identifies a range of actions and stakeholders that contribute to the vision and goals of the Resilient Rivers Initiative, with no single lead to coordinate the delivery of actions, there is a risk the actions will not be implemented in a strategic and coordinated way. The Resilient Rivers Taskforce is investigating governance options to support the delivery of prioritised actions, as well as those of other Catchment Action Plans in the region. As mentioned in Table 4 the top priority management action is to strengthen institutional arrangements at a catchment-scale level (Action 1).

Known land use changes

The SEQ Regional Plan (*ShapingSEQ*) provides over all guidance to infrastructure and land use in South East Queensland. *ShapingSEQ* will be reviewed sometime between 2022 and 2024 and may inform a future review of this CAP.

Monitoring, reporting and evaluation

The action plan includes indicative priorities which are subject to government budgetary consideration, improved knowledge of the plan's performance over time through monitoring activities, and ongoing engagement with the community and key stakeholders.

Progress on action implementation will be monitored through the reporting framework established under the Resilient Rivers Initiative, including regular reporting to the Resilient Rivers Task Force. It should be noted that monitoring, evaluation, reporting and improvement on the implementation actions will, where possible, be incorporated into existing regional Natural Resource Management planning framework to avoid duplication.



ATTACHMENT 1

Summary of key documents.

CATEGORY	WATER SERVICE PROVIDERS		WATER RESOURCES AND SUPPLY		LAND USE AND PLANNING	ENVIRONMENTAL PROTECTION	VEGETATION MANAGEMENT	EXTRACTIVE INDUSTRY
Queensland legislation	Water Supply (S&R) Act 2008 Public Health Regulation 2018	SEQ Water (Distribution and Retail Restructuring) Act 2009	Local Government Act 2009 Local Government Regulation 2012	Water Act 2000 Water Regulation 2016	Planning Act 2016 Land Act 1994 Soil Conservation Act 1986	Environmental Protection Act 1994 Environmental Protection Regulation 2008 Environmental Offsets Act 2014 River Improvement Trust Act 1940 Environment Protection and Biodiversity Conservation Act 1999 Fisheries Act 1994	Water Act 2000 Nature Conservation Act 1992 Vegetation Management Act 1999 Vegetation Management Framework Amendment Act 2013	Water Act 2000
Policy	WaterQ: a 30-year strategy for Queensland's water sector (2014)				State Planning Policy 4/10 Healthy Waters (2010)	Environmental Protection Policy (Water) 2009 – Environmental Values and Water Quality Objectives Environmental Offsets Policy (2014) (for specific offsets)		

CATEGORY	WATER SERVICE PROVIDERS			WATER RESOURCES AND SUPPLY	LAND USE AND PLANNING	ENVIRONMENTAL PROTECTION	VEGETATION MANAGEMENT	EXTRACTIVE INDUSTRY
Regional plans				Water Resource (Moreton) Plan 2007 Moreton Resource Operations Plan 2009 SEQ Regional Water Security Program 2016-2046 Bulk Water Supply Code 2013	ShapingSEQ: South East Queensland Regional Plan 2017 South East Queensland Infrastructure Plan and Program 2009-2026 South East Queensland Water Strategy 2010	The South East Queensland Natural Resource Management Plan 2009–2031		
Local government plans		Water Netserv Plan South East Queensland Customer Water and Wastewater Code (2017)	Council asset management plans Budgeted statement of income and expenditure Annual performance plans and operations report for Council water business units		Statutory Planning Schemes Priority Investment Plans (LGs) Infrastructure Charges Schedules (LGs) Sub-regional Total Water Cycle Management Plans Somerset Region Planning Scheme 2018 Council asset management plans			

