



**GOULBURN  
BROKEN**

CATCHMENT  
MANAGEMENT  
AUTHORITY

A photograph of a sunset over a hilly landscape. The sun is a bright, glowing orb on the right side of the frame, casting a warm, golden light across the scene. The hills are silhouetted against the sky, and a layer of mist or fog hangs in the valleys between the hills. The foreground shows some trees and grass. The image is framed by dark, wavy shapes at the top and bottom.

# **Commuting Hills**

## SES Local Plan

## The Commuting Hills

The Commuting Hills features the mountainous urban fringe of the southern and south-western Goulburn Broken Catchment. Large tracts of public land and small privately owned forested land remain over much of this area. Towns include Kilmore, Broadford, Kinglake and Marysville.

Traditional Owners shaped the land of the Commuting Hills. Since then, the Commuting Hills has been cleared for agriculture and gold rushes and rail and road infrastructure. A large number of residents in this area commute to workplaces outside of the catchment i.e. Melbourne.

Ecologically this area is highly valued for the extent and connectivity of remaining unique forests and the rich diversity of species. Forests are also highly valued for the lifestyle they offer to people who live here, as well as the economic value created through agriculture, forestry and recreation.

This area is of significant cultural value, with many Aboriginal sites remaining in these largely undisturbed landscapes. Waterways are highly valued for their pristine condition and the important service they provide; fresh clean water throughout the Catchment. Communities here are diverse, vibrant and energetic. The future aspiration for the Commuting Hills is an area that safely enhances its natural appeal and value for those living, farming, working and visiting.

## Working on Solid Foundations

Effort to sustain and restore the natural environment that underpins our way of life is by no means new. The area's landholders have worked with a range of stakeholders to maintain and improve region's land, water and biodiversity assets over the years. While acknowledging this effort there is also recognition building the region's resilience to adapt to current and future drivers of change is an ongoing challenge.

## The Challenge Ahead

Although the Commuting Hills has large areas of native vegetation, land-use changes on private and public land (described above) need to be managed and monitored. Native vegetation ecosystem services (and threshold parameters to be managed) include:

- biodiversity habitat (quality, patch sizes and corridor widths)
- clean water (riparian buffer widths)
- natural amenity (patterns of native vegetation).

Extreme climate variability has resulted in drought, fires and floods over the last decade, impacting on this area long after the event. This is exacerbating the impacts of land-use change and is placing an additional burden on rural communities, several of which have been stretched to breaking point.


Increased frequency of bushfires and drought, resulting from extreme climate variability, and planned fires are significant additional threats to aquatic biodiversity habitat and water quality (through increased soil erosion) and to terrestrial biodiversity habitat (loss of structural diversity).

The spread of urban populations and the resulting development also need to be considered in the context of bushfires and floods so that economic and social values are not significantly impacted.

## Actions and Effort - Embed the resilience approach

*\*Progress rating is an indicative qualitative assessment, these will be further refined through data analysis, stakeholder and community consultation.*

Strategic priority: Update and develop strategies			
Responsibility			
<b>RCS Actions</b> Review and update existing strategic documents and sub-strategies and create new ones according to need.	<b>Effort</b> Monitor and record effectiveness of plan implementation (WS)	<b>Progress*</b> 	<b>Case Studies</b> Continue to implement and update stormwater management plans

Strategic priority: Plan at social-ecological system scale				
Responsibility		 GOVERNMENT	 COMMUNITY	
<b>RCS Actions</b> Develop an adaptive planning process for social-ecological systems to build and enhance their resilience	<b>Effort</b> Develop links with Local Government "Health and Wellbeing Plans" (WS)	<b>Progress*</b> 	<b>Case Studies</b>	

**Strategic priority: Provide adaptive management and leadership**

**Responsibility**



**RCS Actions**

Build community and agency capacity to respond together to drivers of change

Research resilience knowledge gaps to inform decision making based on thresholds and tipping points

**Effort**

Strong emphasis needed on community capacity building (WS)

Maximise value of voluntary groups (WS)

Ensure regular contact to understand progress and understand who leads what (WS)

Describe what resilience is and start measuring it (WS) (GB CMA and others)

**Progress\***



**Case Studies**

South West Goulburn Landcare Network have been running the Farm Blitz Program with annual funding since 2011. Events are regularly coordinated to share knowledge, involve people and build social networks.

**Actions and Effort - To Strengthen Partnerships**

**Strategic priority: Reinforce relationships between agencies and industry**

**Responsibility**



**RCS Actions**

Define roles and relationships with regional delivery partners

**Effort**

Investigate and take opportunities to collaborate with industry (WS)

Need to collectively look for opportunities to fund priority projects (WS)

Need to improve information sharing e.g. environmental assets. This will assist in evaluating progress (WS)

Identify overlapping and complimentary strategies and work on improving connections (WS)





**Progress\***







**Case Studies**

Involvement in Goulburn Valley-Water's Ecological Risk Assessment into upgrade of waste water treatment for the growing populations of Mansfield and Kilmore, provides opportunity to define mutually beneficial outcomes.





### Strategic priority: Manage Public land collaboratively

<b>Responsibility</b>				 GOVERNMENT	 COMMUNITY	 GBCMA
<b>RCS Actions</b>	<b>Effort</b>	<b>Progress*</b>	<b>Case Studies</b>			
Undertake works on public land and Crown land frontages to improve waterways and wetlands	<p>Mange all remnant vegetation collaboratively e.g. CMN (WS)</p> <p>Including the public/private interface. There are various examples. (WS) (Public land and frontage managers)</p>		Landholders, Strath Creek Landcare Group and various government agencies (GBCMA, DELWP, DEDTJR, Local Council, VicRoads) have collaborated to address blackberry infestations along the King Parrot Creek to optimise results with greatest efficiency.			

### Strategic priority: Adopt flexible engagement approaches

<b>Responsibility</b>				 GOVERNMENT	 COMMUNITY	 GBCMA
<b>RCS Actions</b>	<b>Effort</b>	<b>Progress*</b>	<b>Case Studies</b>			
Build capacity in existing and new conservation groups to deliver catchment management projects	<p>Tailor education to the ever changing types of land managers. Approaches that have worked well include field days covering various topics (WS)</p>		Farm Blitz program facilitates training opportunities for skill sets determined to be in need and/or of interest to participants. Regular workshops coordinated.			

## Actions and Effort - To Strengthen Partnerships

Strategic priority: Capture opportunities from land development				
Responsibility		 GOVERNMENT	 COMMUNITY	 GBCMA
RCS Actions	Effort	Progress*	Case Studies	
Plan land-use to minimise loss of biodiversity	<p>Work with Murrindindi and Mitchell Councils to identify high value habitat assets and connectivity pathways to inform planning (RCS) (CMA/DEPI)</p> <p>Assist local government to develop and apply appropriate planning tools for all council plans and strategies (e.g. Municipal Strategic Statement review, policies, &amp; overlays) to increase the protection and reduce risks to biodiversity (e.g., matching land use intensity to land characteristics) (BS 2010) (WS) (CMA/DEPI)</p> <p>Undertake “rural area strategies” to detail planning controls that will provide direction for appropriate use and development of rural areas (WS) (Local Government)</p>		<p>This is supported by Biodiversity Action 1 of the Mitchell Shire Environment Strategy (2014)</p> <p>GB CMA participation in Murrindindi Environmental Advisory Committee to share information, discuss and provide comment to local council around natural resource management.</p> <p>This is supported by Rural land use and management action 5 of the Mitchell Shire Environment Strategy (2015)</p>	
Plan land-use to minimise loss of biodiversity	<p>Primarily in the Box-Ironbark Forest areas, possible interventions: alternative firewood plantations, large tree protection, encouragement of natural regeneration, ecological thinning, native herbivore management, provision of permanent artificial hollows, reinstatement of understorey (including targeted seed collection programs). Also, seek historical data and monitoring results from the large natural reference area of Puckapunyal</p> <p>Strategic Land use planning for native vegetation off setting – Local Government over the counter Native Vegetation off setting program</p>			
Manage wastewater treatment and stormwater runoff to minimise pollutants to urban waterways and wetlands	Continue to implement, review and evaluate urban Stormwater Management plan and programs.		Continue to implement and improve water sensitive urban design (WS)	

**Strategic priority: Capture opportunities from land development (cont.)**

**Responsibility**



**RCS Actions**

Manage public land to minimise loss of biodiversity

Promote broader community awareness and acceptance of practices to protect and improve the condition of natural assets

Promote land-use capability assessments and implementation, including use and management of water

**Effort**

Work with all land managers, including Parks Victoria, DEPI, local government and private landholders adjacent to public land to better manage the Puckapunyal public/private land interface (modified RCS)

Promote land management practices that protect water quality and yield (RWS)

Pest Plant and Animal Control e.g. including Gorse & Carp (CNRMAP 2013)

Promote Whole Farm Planning program (RCS)  
Support and promote projects that work with landholders to achieve greater awareness and uptake of best practise e.g. Equine Landcare (CNRMAP 2013)

**Progress\***

**Case Studies**

Mitchell Shire Council Land Management Policy addresses land degradation problems; pest plants and animals, salinity, erosion, and loss of native flora and fauna. Eligible landholders receive rate reductions for land management practices that arrests land degradation that has off-site and downstream effects (RCS)

Promoted awareness and involvement in carp management at the Hughes Creek Fish Circus in Avenel this year.

Mitchell Shire Council distributes information on biodiversity, native vegetation, weeds and sustainability through the Rural

Landholders Kit and New Residents Kit. The

Kit is sent to all new landholders >2ha (RCS)



### Strategic priority: Plan for and manage floods

#### Responsibility



#### RCS Actions

Understand more about the nature of flooding to manage its impact on the natural and built environments

#### Effort

Learn from historic events and respect local knowledge (WS)

#### Progress\*



#### Case Studies

GB CMA undertake flood studies across the catchment to help inform decisions and identify risk. A study was recently completed for Flowerdale, while investigations are presently underway for Buxton and Kilmore townships.

[King Parrot Creek Design Flow Estimates Report](#)

## Actions and Effort - Adapt to water policy reform

### Strategic priority: Update and develop strategies

#### Responsibility



#### RCS Actions

Influence water policy development and implementation to secure water for improving natural asset condition and social and economic wellbeing

Create opportunities for community leaders to contribute to water policy

#### Effort

Encourage wider use of groundwater and close down surface water catchments where appropriate (WS)

Upper Goulburn groundwater management plan shall manage the issue or trade of entitlement (WS)

Expand and develop partnerships with Landcare and corporate groups to assist in delivery of fencing and revegetation programs along riparian zones on stream of significance (WS) (Government/Landcare)

Mind shift needed at DEPI to vary riparian land use along stream of significance (WS) (DEPI)

Promote that riparian improvements mean increase in property value (WS) (Government and others)

Look for opportunities when the new Victorian Water Act is enacted (WS)

#### Progress\*



#### Case Studies

Consult with local representatives and other agencies to define priorities and determine how best to reach target audience. Use opportunities to cross promote programs and undertake complimentary works.

Continue to support and promote riparian protection. Share information as it becomes available through various networks, such as [Farmers Like Trees](#)

### Strategic priority: Deliver water to waterways and wetlands

**Responsibility**



**RCS Actions**

Plan, deliver and monitor environmental water delivery to improve the condition of priority waterways and wetlands

**Effort**

Continue to improve the other elements of waterways and wetlands (WS)

**Progress\***



**Case Studies**

Goulburn River investigations have been undertaken to guide decisions on flows required to achieve different outcomes.

### Strategic priority: Use water efficiently on farms

**Responsibility**



**RCS Actions**

Modernise water delivery on irrigated land to provide ecological and productivity benefits

**Effort**


Work with dryland agriculture to secure/develop water resources to maintain/increase agricultural production (WS)  
  
Educate about the cost/use of farm dams e.g. evaporation (WS)





**Progress\***




**Case Studies**

## Action and Effort - Adapt to increase farm production

Strategic priority: Establish sustainable agricultural practices			
Responsibility			
 GOVERNMENT  COMMUNITY  GBCMA			
<b>RCS Actions</b> Create awareness and acceptance of sustainable management practices to improve land and soil condition	<b>Effort</b> Work with land managers to promote sustainable farming practises including soil health practises (L&B Team engagement) (WS) (Public land and frontage managers)  Continue to adjust whole farm planning to suit changing landholder needs (WS)  Ensure biodiversity protection is a key component of whole farm planning (WS)	<b>Progress*</b> 	<b>Case Studies</b> Support agri-business, currently happening but more needed (WS)  Deliver whole farm planning (WS)  Continue to focus on remediating historic and emerging soil erosion issues to maintain the resilience of the natural environment and agricultural values (WS)

Strategic priority: Increase biodiversity in agricultural land-use			
Responsibility			
 GOVERNMENT  COMMUNITY  GBCMA			
<b>RCS Actions</b> Create awareness and acceptance of land management practices that protect and improve terrestrial and aquatic habitat  Environmental stewardship opportunities for land managers	<b>Effort</b> Continue to support and work with Landcare to revegetate strategic linkages particularly along waterways (WS)  Improve crown water frontage management for community benefit (WS) (DEPI)  Provide incentives for landholder stewardship (active management for conservation) (BS 2010) (Government and others)  Promote concept of farm dams as wetlands (WS)	<b>Progress*</b> 	<b>Case Studies</b> Promoted incentives to improve natural resource management on private property to Shires and at events.  Permanently protect areas on private land ensuring protection is upheld e.g. TFN covenants (WS)

## Action and Effort - Adapt to climate variability

Strategic priority: Adapt to climate variability risk				
Responsibility		GOVERNMENT	COMMUNITY	GBCMA
RCS Actions	Effort	Progress*	Case Studies	
<p>Factor risk of climate variability and identify adaptation strategies in Goulburn Broken CMA and partner plans</p> <p>Factor risks to natural assets into public land fire management plans</p>	<p>Implement bio links e.g. Piper (WS)</p> <p>Identify areas of drought refugia, and work with research institutions to better understand the influence of fire regimes on various biota (RCS) (CMA/DEPI)</p> <p>Recognise the vulnerability of Dryland agriculture (WS)</p> <p>Permanently protect remnant vegetation (WS)</p> <p>Consider biodiverse carbon plantings (WS)</p> <p>Find ways to support on farm energy efficiency and generation (WS)</p> <p>Assist with and support the implementation and revision of the Goulburn Broken Greenhouse Alliance (GBGA) Climate Change Adaptation Plan in conjunction with the GBGA.</p> <p>Input into a strategic approach to planned burning that considers ecological values (RCS) (DEPI)</p>			

### Strategic priority: Respond and recover from climatic events

#### Responsibility



#### RCS Actions

Plan and implement flood, fire and drought response and recovery

#### Effort

Input into a strategic approach to planned burning that considers ecological values (RCS) (DEPI)

Ensure information about high priority biodiversity assets is considered by fire-fighting authorities prior to and during wildfires. (BS 2010) (DEPI)

Support and facilitate collaboration between NRM industry and the CFA so that biodiversity and fire are not seen as conflicting e.g. use community fire guard model (WS)

Draw on local resources for prompt response to disasters (WS)

Factor community morale building into recovery (WS)

Build community resilience through increasing community awareness and knowledge to live with and plan for climatic events (WS)

#### Progress\*



#### Case Studies

Contribute to the Hume Regional Emergency Management Committee (RCS)

Gecko CLaN were actively involved with fire recovery in the 2015 in the Creightons Creek, Lake Rowan and Stewarton region.

Seymour flood mitigation project underway (WS)

### Strategic priority: Capture opportunities from a low carbon future

#### Responsibility



#### RCS Actions

Identify where carbon sequestration activities provide environmental, economic and social benefits

#### Effort

Develop East-West linkages for migration (biodiversity) under climate change (Priority zones background paper to BS 2010)

Work collaboratively to best implement vegetation offsets (WS)

#### Progress\*



#### Case Studies

## Action and Effort - Additional Actions and Ideas

- Use biodiversity information and knowledge to identify spatial priorities at the landscape-scale (e.g. existing and proposed biolinks) (BS 2010)
- Develop a NEW ecologically based land development program. As this area is close to Melbourne and the airport there appears to be a need for properties with high environmental value, or the potential to have high environmental values for people to own, enjoy and improve. TFN has some experience here (WS)