



ALPINE SHIRE

**Alpine Shire Council
Climate Change Draft Action Plan 2012 - 2016**

Produced for the North East Greenhouse Alliance

January 2012



Tribal Frog Pty Ltd



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Disclaimer

While every attempt has been made to make this information as accurate as possible, the North East Greenhouse Alliance and its members and contributing organisations and the author assume no legal responsibility for decisions based on the contents of this document.

Ownership

This document has been produced as part of the larger project "North East Victoria Adapting to a Low Water Future". It is recognised by members of the North East Greenhouse Alliance that this document is a working document, and that Alpine Shire Council will retain ownership of this document.

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1. Alpine Shire Profile

The Alpine Shire is situated in the North East of Victoria. It is approximately 300 kilometres from Melbourne. The majority of the Shire is public land, comprising approximately 92% which includes Mt Buffalo National Park and some areas of the Alpine National Park. The Shire consists of three main towns: Bright, Myrtleford and Mt Beauty. Each of these towns proudly respects its own heritage and individuality.

There are a number of smaller towns across the Shire including Tawonga, Tawonga South, Wandiligong, Harrietville, Dederang, Porepunkah, Bogong Village and Dinner Plain. Many rural districts are also widely spread across the Shire. The main industries in the Alpine Shire are: tourism; accommodation and food services; agriculture and forestry; manufacturing; retail trade; health care and assistance.

The Alpine Shire is an area of magnificent natural beauty. There are snow-capped mountains in winter, invigorating fresh air, clean rivers and creeks, broad sweeping valleys, and a vista of scenic beauty which changes with the seasons. The beauty of the Alpine Shire attracts visitors from all parts of Australia and overseas, keen to experience the magic of this beautiful environment.

2. Introduction

The impacts of climate change and the resulting water issues and extreme natural events represent a significant challenge to Council's business, operations and service delivery. Climate Change will increase stress on local communities (bushfires, drought, floods) and the impacts will fall in a disproportionate manner on those that are disadvantaged or under financial stress. Climate change is likely to have a significant impact on the well-being of the North East region by undermining the local economies, ecosystem viability and affecting the community's health and viability.

The *Alpine Shire Climate Change Action Plan 2012- 2016* (referred to hereafter as *Action Plan*) does **not** include detail on the impacts and opportunities of climate change within the Alpine Shire. Nor does it include definitions and detail on climate change adaptation and mitigation, as this information is already included within a variety of documents as detailed in section 3.1. Please refer to these documents for more information.

3. Development of this Action Plan

3.1 Background

Since 2005 Alpine Shire Council has been proactive with its commitment to understand the impacts climate change will have on the communities and the natural environment within the Alpine Shire. Alpine Shire Council has:

- Been an active member of the North East Greenhouse Alliance;
- Instigated and participated in local and regional climate change research and preparation of management documents; and
- Delivered many community climate change projects including the very successful deliberative democracy *Local Voices Shaping Our Future* and *Youth Council Climate Change Forum*.

The reports and documents relating to climate change include:

Date	Document	Author	Produced for	Abbreviated reference
2006	Greenhouse Local Action Plan	Alpine Shire Council	Alpine Shire Council	GLAP
2010	Report for Climate Change Risk Assessment and Adaptation Planning	GHD Consulting	Alpine Shire and Towong Shire Councils	CCRAAP
2010	Local Voices Shaping Our Future Action Plan	Alpine Shire Council	Alpine Shire Council	LVSOFF
2011	Adapting to a Low Water Future: Climate Change Risk Assessment and Adaptation Plan	Marsden Jacob Associates	North East Greenhouse Alliance	ALWF
2011	North East Victoria – Adapting to a low water future: review of municipal documents	Two Hemispheres Environmental Consulting	North East Greenhouse Alliance	RMD
2011	A Framework based on the Youth Climate Change Forum	Pat Easterbrook	Alpine Shire Council	YCCF

Each of these documents and reports provide a range of recommendations, actions and suggestions. The actions included within this *Action Plan* have originated from the above mentioned documents as well as being aligned to the following key strategic documents:

- Council Plan 2009 – 2013 (2011 update)
- Council's 2030 Community Vision (2010 review)
- Council's Liveability Plan 2009
- Hume Strategy for Sustainable Communities 2010

The following documents were also reviewed to give context to the development of this *Action Plan* but did not contain recommendations or actions:

- Understanding Climate Change Impacts – A Climate Change Adaptation Framework Final Report (2007) North East Greenhouse Alliance; and
- Historical climate, climate change and water availability (2011) Department of Primary Industries for the North East Greenhouse Alliance.

3.2 2030 Projections

A range of climate change projections have been researched for North East Victoria, including Alpine Shire. These projections have been forecasted for both 2030 and 2070. Detailed information on the 2030 and 2070 projections can be found within the 2011 Historical climate, climate change and water availability document.

There are a range of scenarios for 2030 and 2070 and current results are showing that North East Victoria is aligning to the high emission scenario. This Climate Change Action Plan has been developed based on the 2030 high emissions projection and scenario.

3.3 Methodology

An internal Council Steering Committee with representation from the North East Greenhouse Alliance was formed to oversee the development of this *Action Plan*. This *Action Plan* was developed by:

- Reviewing the above mentioned documents (section 3.1) and compiling a list of all the action and recommendations;
- Hosting three staff workshops to raise awareness of the actions and to review the combined action list of over 260 actions and recommendations;
- Asking all participants at these workshops to list the most important 10-15 actions/ recommendations as they relate to their position and directorate they work within;
- Staff identified 104 actions as important and could be implemented and achieved by 2016; and
- These nominated actions/ recommendations were then drawn together, combined (where relevant), prioritised and have become the 45 actions that Alpine Shire will focus on implementing from 2012 to 2016.

3.4 Supporting Database

A supporting database has been compiled as part of this project. This database includes all of the actions from each of the background documents (Referred to as *Parent Document* section 5 Actions of this *Action Plan*). It also includes the raw data from the staff workshops and it was upon this raw data that the action table within this *Action Plan* was developed.

Included within the *Parent Documents* were reduction targets for Council's water and greenhouse gas emissions. These targets have been included within the supporting database to ensure the historical context is not lost.

There are actions within this *Action Plan* (actions 2.1 and 2.2) that relate to undertaking audits. As part of undertaking these audits Council will be investigating whether new targets need to be developed and if so, will develop the targets to align to state and national policy and legislation.

Alpine Shire Council has been very proactive in implementing many climate change actions. Included within the supporting database is information relating to actions completed or well on the way to being completed. This information was gathered during the staff workshops and through meetings with members of the Steering Committee.

4. Council Commitment to Climate Change

4.1 Context

Included with the actions identified by staff were four actions that recognised that if Council was to successfully adapt to climate change then climate change needed to be incorporated across Council's operations and service delivery. These actions are:

- Council should recognise that dealing with climate change is a core activity that cuts across and impacts all elements of council business¹
- Ensure sustainability is embedded in all council policy and strategic directions to ensure Council is promoting, acting and leading on climate change²
- To include climate change considerations in capital works decisions, policies, strategies and long and short term planning to enable adaptation responses to be incorporated into mainstream decision making³ ; and
- To successfully adapt to climate change and its predicted impacts, it is important for Alpine Shire Council to develop an agreed position in relation to climate change impacts and risks, and to communicate this position throughout Council and the community⁴.

Council's Commitment to Climate Change has been developed in response to the above four actions and to assist Council in implementing its strategic documents including this *Action Plan*, Council Plan, 2030 Community Vision and Liveability Plan.

¹ Review of Municipal Documents Opportunities for Change Action 1

² Local Voices: Shaping our Future Action 8.3.1

³ Climate Change Adaptation Framework Page 7-4

⁴ Report for Climate Change Risk Assessment and Adaptation Planning Alpine Shire and Towong Shire P53

This Commitment to Climate Change will:

- Allow Council to align adaption actions with the long-term vision and strategy for Alpine Shire Council's direct areas of responsibility;
- Demonstrate leadership through the uptake of practical and financially prudent measures;
- Provide an opportunity for the community to engage with Council on adaptation planning;
- Provide a basis for seeking Victorian and Australian Government support through policy and regulatory changes, grants and education/ information programs; and
- Provide an opportunity to liaise with other government agencies, organisations and relevant community groups.

4.2 Commitment

The environmental conditions that society is faced with due to climate change will require changes in thinking and innovative adaptations in order to prosper. It is vital that Council ensures that the ecological future of our shire is protected and that residents are equipped to adapt to changes as they occur (Liveability Plan 2009 Alpine Shire Council).

Alpine Shire Council is committed to adapting to Climate Change by:

1. Leading by example;
2. Managing the impact of climate change on council assets, infrastructure, operations and service delivery;
3. Focusing on climate change actions relating to Council operations and service delivery;
4. Planning for healthy communities by focusing on how to survive, maintain and enhance liveability in a world of changing environmental circumstances;
5. Increasing community resilience;
6. Working in partnership with community;
7. Managing the impact of climate change on community, visitors, local businesses and tourism activities;
8. Working in partnership with relevant government agencies and organisations;
9. Being a leader in sustainability activities, climate change adaptation, reduction in water and energy use; and
10. Participating, facilitating and driving sustainable change management activities across the municipality and North East Victoria.

Note: The wording of Council's Commitment to Climate Change has been sourced from the documents mentioned in section 4.1 and Appendix 1.

5. Actions

5.1 Implementation

The action have been categorised into the following three categories:

- Education and Awareness
- Council Business
- Advocacy

Each action has been assessed on the importance of being implemented and Council's ability to implement. The priority assigned to each action has come from this assessment.

The Action table in Section 5.3 outlines each action. The 'More Information' column expands upon the action and in most cases, includes wording directly from the *Parent Document*. The 'Link to Parent Document' column lists the source of the actions. Please refer to the supporting database for detail about the *Parent Documents*.

The actions identified within this Action Plan should be incorporated into the internal planning process of Council, including the Council Plan, each Directorates business plan and flowing through to individual work plans for relevant staff. This process will allow for the required resources, including financial resources, to be allocated to individual actions over the life of the Plan.

5.2 Monitoring and Review

The monitoring of this *Action Plan* is to occur annually with Council's progress on implementing the actions to be reported to Council and community. The review and update of this *Action Plan* is to occur early 2016.

5.3 Action Table

Action No	Action	Responsibility	Priority	More information	Link to Parent Documents
1. Education and Awareness					
1.1	To regularly share relevant environmental, sustainability and climate change educational information through local communication channels, Council's website, local and regional networks and local community groups.	Sustainable Development	High	Educational information is to cover awareness of biodiversity, waste, water and energy; reduction in waste, water and energy consumption; increase in biodiversity awareness; climate change; community and council achievements, programs and opportunities; transport; Landcare programs, achievements and services; Stormwater; lighting; paper usage. 3.1 Collaborate with conservation, environmental groups, and schools to promote environmental responsibility.	GLAP: Actions 3, 4, 17, 29, 31, 32, 42, 44, 45, 46. RMD: Actions flooding 7. CCRAAP Action 7.2. LVSOA Actions 1.1.1, 1.1.2, 1.1.3, 1.1.4, 6.2.1, 6.3.1, and 10.1.3. YCCF Action 3.1.
1.2	To continue Council's internal Green Team to promote sustainability and climate change initiatives relating to Council business and operations.	Sustainable Development	High	Representation of Green Team is from all directorates of Council and focuses on education, behaviour change and information programs, initiatives relating to sustainability and climate change adaptation and mitigation relating to Council services and operations.	GLAP: Actions 1, 3, 4, 6, 7, 8, 10, 11, 24, 30, 31, 42, 29. LVSOA Actions 8.1.1.
1.3	Build and improve support to enhance sustainability and environmental groups throughout the Shire.	Sustainable Development	High	1.2.1 Build and improve support to enhance sustainability and environmental groups throughout the Shire. 6.2.1 Support community groups to enhance climate action. 6.2.1 Continue to support the School Environment Education Directory (SEED) and encourage local schools to participate in climate action.	LVSOA Action 1.2.1, 6.2.1.

Action No	Action	Responsibility	Priority	More information	Link to Parent Documents
1.4	Encourage and support community initiatives to reduce waste to landfill.	Infrastructure Services	High	Compost bins; worm farms for kitchen scraps, shredding garden waste for mulch, use a green bag instead of disposable plastic bags for shopping, choose products with less wrapping and packaging, buy in bulk - many items can be bought more cheaply in large amounts. Investigate the suitability of providing an incentive for residents to purchase compost bins.	LVSO Action 12.2.1. GLAP Action 45, 46
1.5	Lead by example with drought tolerant and non weedy plant selection and community education.	Infrastructure Services	High	6.3 Shift to more drought tolerant plant species. Establish specific action plan for which plants will be planted where and progressively replaced.	CCRAAP Risk 6 Action 6.3.
1,6	Implement a consultative program on climate change between youth and Council.	Corporate and Community	High	1.1 Establish an annual Youth Climate Change Forum.	YCCF Action 1.1
1.7	To organise, host and or support workshops and training opportunities for staff and community to learn about climate change adaptation and mitigation practices, emergency response and environmental sustainability actions that can be implemented within businesses and households.	Sustainable Development	Medium	To deliver a minimum of 2 trainings, workshops a year for Council staff, local residents, businesses to learn about climate change adaptation and mitigation practices, emergency response/ post emergency and environmentally sustainable actions that can be implemented within businesses, council operations and households.	GLAP: Actions 3, 4, 31. CCRAAP Action 1.2. LVSO Actions 6.2.1, 6.3.1, 8.1.1, 8.1.2 and 10.1.3.

Action No	Action	Responsibility	Priority	More information	Link to Parent Documents
1.8	To create climate change and environmental sustainability educational resources and programs specific to council services and operations.	Sustainable Development	Medium	Examples of educational resources mentioned in background documents include: promoting walking and cycling; updating welcome information kit for residents to include information on responding to extreme weather events, personal steps to adapt to climate change and environmental activities/ achievements occurring within Alpine Shire and how they can be involved; information on preparedness and response to extreme events. 2.1 Develop and implement an education program to provide sustainability information to the community. 3.1 Collaborate with conservation, environmental groups, and schools to promote environmental responsibility.	RMD Flooding Action 7. LVSO 9.1.1, 8.3.1, 6.2.1, 10.1.3. YCCF Action 2.1, 3.1.
1.9	Support and promote whole of community sustainability projects.	Sustainable Development	Medium	32. Organise a Sustainable Street approach project; Harrietteville's sustainability project is first example of this action being implemented. 6.1.1 Facilitate a pilot community garden in Harrietteville and roll out to other communities in the Shire.	GLAP Action 32. LVSO 8.1.1, 8.1.2, 12.2.1, 12.3.1. LVSO 6.1.1.
1.10	Develop a planting guide outlining the most suitable species to plant in the Shire.	Infrastructure Services	Medium	7.2.2 Develop a planting guide outlining the most suitable species to plant in the Shire.	LVSO 7.2.2.

Action No	Action	Responsibility	Priority	More information	Link to Parent Documents
1.11	Work with local chambers of commerce, business associations and local educators, to facilitate and promote a training and capacity building program for small and medium sized business continuity planning.	Sustainable Development	Medium	G1. To build the resilience of the local economy to climate change impacts and extreme events, Council to work with local chambers of commerce, business associations and local educators, should facilitate and promote a training and capacity building program on business continuity planning for small and medium sized businesses in the region. G2. Council to work with local chambers of commerce and industry associations should review the risk exposure of local industry to climate change, climate variability and water availability. G3. Council to develop a regional communications plan aimed at educating and providing timely information to visitors about the risks of extreme weather events and how to act should these events occur.	ALWF Action G1, G2, G3.
1.12	Develop a regional communications plan aimed at educating and providing timely information to visitors about the risks of extreme weather events and how to act should these events occur.	Sustainable Development	Medium	H1. Council to develop a regional communications plan aimed at educating and providing timely information to visitors about the risks of extreme weather events and how to act should these events occur.	ALWF Action H1.
1.13	Introduce an Environmental Award in the Australia Day presentations.	Corporate and Community	Low	An Environmental Category is to be created within the Australia Day Awards to recognise the environmental achievements of a local resident, community group, family, business.	GLAP: Action 5
2. Council Business					
2.1	Annually undertake audits of Council's waste, lighting, street lighting, energy and water consumption and green purchasing.	Infrastructure Services	High	Audits are to include all Council owned and managed buildings, fleet, reserves and assets including street lights. Continue to implement	GLAP: Actions 6, 9, 10, 11, 12, 13, 14, 16, 17, 26, 29. RMD: Action Carbon Pricing 2,

Action No	Action	Responsibility	Priority	More information	Link to Parent Documents
				relevant audit programs like EcoBuy, Planet Footprint to measure Council's resource consumption and purchasing patterns.	3.
2.2	Monitor and annually report on Council's Audit (waste, water, lighting, street lighting and energy consumption and green purchasing) results.	Sustainable Development	High	To share results of Council's resource consumption and purchasing patterns internally and with community and relevant partner organisations.	GLAP: Actions 6, 9, 10, 11, 12, 13, 14, 16, 17, 26, 29, RMD: Action Carbon Pricing 2, 3.
2.3	Internal Council processes and reporting templates are to be updated to include sections specific to climate change and environmental sustainability.	Corporate and Community	High	The following documents, processes and reporting templates are to be updated with specific reference to climate change and environmental sustainability: purchasing policy; tender documents; council reports; new project applications; vehicle purchasing policy.	GLAP: Actions 6, 7, 8, 20, 21, 22, 24, 25. LVSOFF Action 8.3.1.
2.4	Relevant Council documents, policies, plans and procedures are to be updated to include climate change adaptation, relevant emergency planning and environmental sustainability.	Corporate and Community	High	The updating of Council documents is to occur when these documents are due for review (or when they are being developed). The following documents are listed in the background climate change reports but is not the limit of Council documents needing updating: Recreation Strategy; Transport Strategy; Walking and Cycling Strategy; Waste Management Plan; Council Plan, Council 2030 Plan, Liveability Plan, Economic Development Strategy and Tourism Strategy. For every plan and strategy, council is to apply a template of questions that identify how the documents and its recommendations have considered, managed and reduced risks associated with climate change. All reports going to Council seeking endorsement or approval, should include a statement from officers how they and/or the consultants have addressed the issue of climate change risk and opportunity. "Perception Marketing" Tourism Strategy is to be investigated to capitalise on forest re-growth	GLAP Actions: 25, 29, 42, 43, 44, 45, 46. RMD Action Opportunities for Change 3, 5; RMD Action Topic Economic Development 3. CCRAAP Action 3.2. LVSOFF Action 8.3.1, 9.1.1, 9.2.1. YCCF Action 2.1.

Action No	Action	Responsibility	Priority	More information	Link to Parent Documents
				and look at different markets. 7. Promote the establishment of new industries within the Shire arising from a changing climate. 3. When Tourism and economic development strategies are updated they are to specifically address managing risks associated with climate change for existing and new businesses and need to examine what the impacts of recent (drought, fire, flood) events and use these as a base case for extrapolating future risks, and reducing them.	
2.5	Continue to reduce waste to landfill and improve opportunities to recycle within Alpine Shire.	Infrastructure Services	High	Continue to improve recycling within Alpine Shire.	GLAP Actions 45, 46. LVSO Action 12.3.1
2.6	Ensure Stormwater Best Management Practices are being implemented.	Infrastructure Services	High	Confirm the status of the CSIRO Urban Stormwater: Best Practice Environmental Management Guidelines and whether this has been upgraded or background documents and technical documents have superseded this work.	RMD Gaps Identified Action 6.
2.7	Existing and future Recreation strategies, Park strategies and Facilities Management are to be proactive in addressing the risk of ongoing, severe water reductions, and to develop both contingency planning and alternative approaches to facility and asset management.	Infrastructure Services/ Sustainable Development	High	1. Existing and future Recreation strategies, Park strategies and Facilities Management are to be proactive in addressing the risk of ongoing, severe water reductions, and to develop both contingency planning and alternative approaches to facility and asset management. 11. Council is to review their open space plans with a view to rationalising and prioritising parks, gardens and playing fields to manage in times of low water availability, and investigate medium to long term actions to ensure ongoing viability of priority parks, gardens and playing fields. 12. To increase water availability for watering of parks, gardens, sportsgrounds and other recreation facilities, council to consider mapping potential non potable water supplies and matching them to 'fit for purpose' uses.	RMD Surface Water Supply and Quality Action 1. ALWF I1, I2

Action No	Action	Responsibility	Priority	More information	Link to Parent Documents
2.8	Council's emergency planning, management, response and recovery is to be of continuous improvement and be inclusive of community resilience, preparedness and proper resourcing.	Infrastructure Services	High	<p>Surface Water Supply and Quality 2. Council to review their current emergency management plans for drought and consider which of these activities should be transferred into standard operating procedures.</p> <p>Recreation and Amenity 1. Council to shift from considering drought management as an emergency response to a risk management item.</p> <p>Economic Development 2. If not already in place, council to develop business interruption plans for municipal operations.</p> <p>10.1.1 Continue to monitor and review the Emergency Management Plan to improve coordination of Council's response to extreme events.</p>	RMD Surface Water Supply and Quality Action 2; Economic Development Action 2; Recreation and Amenity Action 1. LVSO Action 10.1.1
2.9	Incorporate and reference existing and future flood studies within Council's Planning Scheme.	Sustainable Development	High	<p>1. Advocate for a clear discussion about risks facing council – legal, reputational and financial risks where flood studies have been undertaken and not incorporated into the Planning scheme.</p> <p>9. There should be a clear discussion about risks facing council – legal, reputational and financial risks where flood studies have been undertaken and not incorporated into the Planning scheme.</p>	RMD Flooding Action 1, 9.
2.10	Expand Council's Business Continuity Plan for Council's operations and services during times of extreme natural events and for the recovery phase of these events.	Corporate and Community	High	<p>1.1 Development of Council's Business Interruption Plan is also to include a review of current council roles and resourcing for emergencies - e.g. % of roles allocated to bushfire prevention.</p> <p>F5 Council is to extend their Business Continuity Plans to improve their ability to cope with the impacts of flooding on staff resources and service provision.</p> <p>J1. Council is to extend their Business Continuity Plans to improve their ability to cope with the impacts of Code Red days on staff</p>	RMD Economic Development Action 2. CCRAAP Risk 1 Action 1.1. ALWF F5, J1, J2

Action No	Action	Responsibility	Priority	More information	Link to Parent Documents
				resources and service provision. J2. Council is to ensure that effective procedures for dealing with the consequences of Code Red days are in place. The procedures should be summarised in a question and answer (Q&A) template for distribution to all human resources and OH&S staff.	
2.11	Provide and promote alternative (bus, train, walking, car pooling and cycling) transport infrastructure and services to better meet the needs of the community.	Infrastructure Services/ Corporate and Community	High	GLAP: Includes TravelSmart planning; providing cycling and walking tracks; including walking/ cycling paths in new developments; promoting walking and cycling alternatives to car-based travelling. 9.1.2 Ensure all new road infrastructure and streetscapes are designed to accommodate bike and pedestrian traffic.	GLAP Action 42, 43, 44. LVSO Action 9.1.2.
2.12	Be proactive and work in partnership with other land managers to reduce fuel loads prior to bushfire season or flooding on land under the management of Council and land close to townships.	Sustainable Development	High	4.1 Council to undertake fuel management in areas where it has direct responsibility e.g. Council nature reserves; 4.1 Council to work with DSE / Parks Vic to manage fuel loads in reserves close to settlements; 4.3 Educate the community on how to reduce the risk of bushfires. Cleaning up fuel and litter. 11.3 Review/improve vegetation management within council managed land.	CCRAAP Risk 4 Actions 4.1, 4.2, 4.3, 11.3.
2.13	Employ an officer to facilitate community education programs around climate change and environmental issues.	Sustainable Development	High	1.1.1 Employ an officer within the environment section to facilitate community education programs around climate change and environmental issues.	LVSO Action 1.1.1

Action No	Action	Responsibility	Priority	More information	Link to Parent Documents
2.14	Update infrastructure planning and design procedures and maintenance schedules to include consideration for climate change, extreme weather events and environmental sustainability.	Infrastructure Services	New procedures High / Existing Procedures Medium	10.1 Planning & budgeting. Prioritise upgrades for existing council assets (e.g. consider public safety, cost, consequence of asset failure to service delivery). 10.1 Preventative maintenance systems (existing infrastructure). Review / focus on bushfire affected areas – more susceptible to erosion, silting etc. 12.1 Improved road and culvert design. Review of design standards (flood capacity). E3 Council is to working cooperatively to develop regional guides and standards for the design of new and upgraded drainage assets.	CCRAAP Risk 10 Actions 10.1, 10.2, Risk 12 Action 12.1. ALWF Action E3.
2.15	Investigate the introduction of a regular kerb-side green waste collection bin.	Infrastructure Services	High	12.1.1 Investigate the introduction of a regular kerb-side green waste collection bin. Also referred to in YCCF document as 11. Establish green waste sites.	LVSOFF Action 12.1.1.
2.16	To provide support and mentorship to youth climate change and sustainability initiatives within Alpine Shire.	Corporate and Community	High	1.1. Collaborate with conservation, environmental groups, and schools to promote environmental responsibility.	4 and Tourism 1. LVSOFF Action 1.3.2. YCCF Action 1.1.
2.17	Analyse existing urban stormwater catchments to identify areas in need of stormwater redevelopment.	Infrastructure Services	Medium	2. Council's Urban Stormwater Plan and is to be assessed whether it is still relevant, and whether any of the remaining recommendations can be carried out. L1. Council is to analyse existing urban stormwater catchments, identifying areas in need of stormwater redevelopment, so as to achieve flow reductions for the purposes of controlling erosion in receiving waterways and reducing urban flood risks. 12.3 Review and implement a Stormwater management plan which includes urban areas.	RMD Stormwater Management Action 2; ALWF L1. CCRAAP Risk 12 Action 12.3.

Action No	Action	Responsibility	Priority	More information	Link to Parent Documents
2.18	Monitor the progress of the Engineers Australia 'Australian Rainfall and Runoff' (ARR) Revision Project.	Infrastructure Services	Medium	<p>Council is to monitor the progress of the Engineers Australia ARR Revision Project. Council is to consider advocating for end user representation on the technical committee or other committees of this project, if not this has not already occurred.</p> <p>Councils with North East Water and the North East Catchment Management Authority should propose that the North East be a pilot project for aspects of the project.</p> <p>The region should invite representatives of the Engineers Australia Project Team to address municipalities on the project, benchmarks and outcomes.</p> <p>Council is to ensure that there is no duplication in research or modelling that has already been undertaken as part of the ARR Revision project.</p>	RMD Gaps Identified Actions 1, 2, 3, 4, 5.
2.19	Review Council's Sustainable Water Use Plan and consider how well it managed in a period of continuing low water availability.	Infrastructure Services/ Sustainable Development	Medium	<p>2. Review Council's Sustainable Water Use Plan and consider how well it managed in a period of continuing low water availability.</p> <p>6.1 Plan – Council to revise and / or develop water use policy, strategy and sustainable water use plan. Strategy to consider & target reduction in water use, access to alternative water supplies for council assets, community and open spaces, e.g.. Bores, different plants, artificial turf, rainwater tanks, recycled water. Use of 'fit for purpose' water. Set measureable targets. 'Lead by example' approach.</p> <p>6.2 Identify and secure funding – use risk assessment and adaptation plans to secure State and Federal funding to implement projects. E.g. Water for Future.</p>	RMD Recreation and Amenity Action 2. CCRAAP Risk 6 Action 6.1, 6.2

Action No	Action	Responsibility	Priority	More information	Link to Parent Documents
2.20	Investigate the introduction of an environmental incentive in conjunction with the Rural Land Strategy and revised Rating Strategy.	Sustainable Development	Low	11.1.1 Investigate the introduction of an environmental levy in conjunction with the Rural Land Strategy and revised Rating Strategy. 10. Investigate an environmental levy. Also referred to in the YCCF document as 10. Investigate an environmental levy.	LVSO Action 11.1.1.
3. Advocacy					
3.1	Advocate for improvement and increase of alternative (bus, train, walking, car pooling and cycling) transport infrastructure and services to better meet the needs of the community.	Corporate and Community	High	4.1 Lobby Vic-Rail, Local Politicians, State Government and Federal Government for an improved public transport system and greater freight transport capacity. 43. Provide suitable walking and cycling tracks 44. Promote walking and cycling alternative to car-based travelling	GLAP Action 43, 44. YCCF Actions 4.1.
3.2	To advocate for the Victorian Planning Scheme to be amended to address rapidly changing levels in flooding and other planning impacts due to climate change, to assist municipalities reduce current and future risks.	Sustainable Development	High	7. To advocate for the Victorian Planning Scheme to be amended to address rapidly changing levels in flooding and other planning impacts due to climate change, to assist municipalities reduce current and future risks.	RMD Gaps Identified Action 7.
3.3	Advocate for risk management and infrastructure replacement 'Betterment' to be considered in relation to extreme events and climate change adaptation.	Infrastructure Services	High	10. Acting as a group, councils should present a case to state and federal government outlining the need for 'Betterment' when replacing infrastructure affected by flooding. 11. Council in consultation with partners should identify a hierarchy of risks to infrastructure for council, state and interstate assets to identify where Betterment would be best applied.	RMD Flooding Actions 10, 11.

Action No	Action	Responsibility	Priority	More information	Link to Parent Documents
3.4	Continue to develop & expand promotion of year round tourism activities.	Sustainable Development	High	17.1 Strategy - Develop & expand promotion of year round activities (e.g. cycling), flexible response to snow available. Work with local businesses to cater for alternate tourism activities. Seek out incentive programs and Grants such as the Australian Tourism Development Program.	CCRAAP Risk 17 Action 17.1.
3.5	Continue to actively support the North East Transport Connections Project and advocate for and promote public transport within the community.	Corporate and Community	High	9.2.1 Continue to actively support the North East Transport Connections Project and advocate for and promote public transport within the community	LVSOF Action 9.2.1.
3.6	Develop a better understanding of the local environment.	Sustainable Development	High	Facilitate the undertaking of energy audits for schools, businesses and private homes.	YCCF Action 2.1
3.7	Advocate and support the North East Victoria Regional Tourism Board (NEVRTB) to seek funding to undertake tourism industry and climate change case studies, which identify potential impacts of climate change on key tourism industries, drawing on recent experience.	Sustainable Development	High	The North East Victoria Regional Tourism Board (NEVRTB) should seek funding to undertake tourism industry and climate change case studies, which identify potential impacts of climate change on key tourism industries, drawing on recent experience.	ALWF Action H3
3.8	Support and work towards a coordinated regional approach to climate change adaptation planning.	Sustainable Development	High	M1. Council is to work towards a coordinated regional approach to climate change adaptation planning, by agreeing to priority actions for implementation from ALWF document and relevant actions in regional strategies such as the Hume Strategy. North East Greenhouse Alliance is a great example of a coordinated regional approach.	ALWF Action M1.
3.9	Advocate State and Federal Government for a permanent emergency officer.	Corporate and Community	Medium	1.3 Lobby state and federal government for a permanent emergency officer as opposed to temporary.	CCRAAP Action 1.3

Action No	Action	Responsibility	Priority	More information	Link to Parent Documents
3.10	In partnership with the Regional Management Forum (RMF) develop and implement a regional training and information sharing program for staff and councillors to increase their understanding on potential implications of climate change for future planning, economic development and other decision making.	CEO	Medium	G1 In partnership with the Regional Management Forum (RMF) develop and implement a regional training and information sharing program for staff and councillors to increase their understanding on potential implications of climate change for future planning, economic development and other decision making.	ALWF Action G1
3.11	Advocate for a 'flooding information' single point of contact to be made readily available to council and the public.	Sustainable Development	Medium	9. Advocate for a 'flooding information' single point of contact to be made readily available to council and the public.	RMD Gaps Identified Action 9
3.12	Investigate developing and implementing a coordinated regional community education program on climate change impacts and risks.	Sustainable Development	Medium	M2 Consider developing and implementing a coordinated regional community education program on climate change impacts and risks.	ALWF Action M2.
3.13	In partnership with NECMA and partner councils seek funding from the State Government to commission research into projected changes of rainfall intensities and duration under climate change scenarios with the objective of producing regional and local rainfall-intensity-duration data and other relevant hydrologic tools.	Infrastructure Services	Low	E6 In partnership with NECMA and partner councils seek funding from the State Government to commission research into projected changes of rainfall intensities and duration under climate change scenarios with the objective of producing regional and local rainfall-intensity-duration data and other relevant hydrologic tools. Refer and link to Action 2.17.	ALWF Action E6.

6. Appendix 1 Description of Climate Change Documents

Date	Parent Document	Author	Prepared for:	Abbreviated reference	Description
2006	Greenhouse Local Action Plan	Alpine Shire Council	Alpine Shire Council	GLAP	A Plan to help Council succeed in reducing greenhouse gas emissions and improving air quality, while increasing energy efficiency and creating better living environments for our community.
2007	Understanding Climate Change Impacts – A Climate Change Adaptation Framework Final Report	URS in association with CSIRO and ISI	North East Greenhouse Alliance	UCCI	The Alliance commissioned this study as the first step in developing the communities understanding of expected change in climate affecting North East Victoria and to assess the likely impacts of climate change and the capacity of the regional community to adapt. The study provides an understanding of the threats and opportunities posed by climate change as well as the responses that could be undertaken.
2010	Report for Climate Change Risk Assessment and Adaptation Planning	GHD Consulting	Alpine Shire and Towong Shire Councils	CCRAAP	This document evaluates the risks associated with climate change for Alpine and Towong Shires. The document establishes the context for the risk assessment process; the risk assessment process and the adaptation planning.
2010	Local Voices Shaping Our Future Action Plan	Alpine Shire Council	Alpine Shire Council	LVSOFF	The aim of the Local Voices Shaping our Future project was to build capacity in Council and the community to work together to respond more effectively to the challenge of a varying climate. Council convened a citizen's jury based on deliberative democracy processes with the focus on 'How can we work together to respond to a varying climate'. This document is the action plan created from the jury's recommendations.
2011	Adapting to a Low Water Future: Climate Change Risk Assessment and Adaptation Plan	Marsden Jacob Associates	North East Greenhouse Alliance	ALWF	The risk assessment explores the full range of potential risks posed by low water availability and increased rainfall variability and prioritises those risks for NEGHA member and partner organisations for the regional community as a whole.
2011	North East Victoria – Adapting to a low water future: review of municipal documents	Two Hemispheres Environmental Consulting	North East Greenhouse Alliance	RMD	This report looks at work already undertaken by the five municipalities within the North East Greenhouse Alliance in the context of the risks and adaptation measures identified. The brief was to examine existing reports, analyse reports; identify whether climate change has been addresses as part of the assumptions; and make recommendations in consultation with the municipalities.
2011	A Framework based on the Youth Climate Change Forum	Easterbrook, Pat	Alpine Shire Council	YCCF	This Framework is based on the aims, procedures, outcomes and recommendations developed at the Alpine Shire Youth Climate Change Forum held 6 April 2011. This Framework has been commissioned by the Alpine Shire in their response to the Youth Forum together with a heightened sense of urgency about environmental sustainability and climate change.
2011	Historical climate, climate change and water availability	Beverly, Craig and Hocking, Mark	North East Greenhouse Alliance	HCCCWA	This study reviewed and analysed historical climate, climate change and water availability within the North East CMA region.