

| Adaptation Solution | Division | Status |
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| <p>Develop an external climate change communication and engagement strategy to continue to raise awareness about climate change issues affecting the community.</p> | <p>City Dev't</p> | <p>A specific climate change community and engagement strategy has not been developed.</p> <p>Compliance have a communication plan that incorporates amenity, safety and emergency information. Key messages are provide at relevant times throughout the year.</p> <p>Information and education about climate change has been distributed through an array of channels, including Sustainable Living Week events, Whitehorse News and Council's Sustainable Living Facebook page.</p> <p>Residents can access free energy efficiency advice through a council partnership with Australian Energy Foundation.</p> <p>Residents and businesses have been encouraged to engage with Sustainability Victoria's Take 2 campaign which provides information about how we can mitigate the risks of climate change. Promotion is through a range of channels including traditional media, social media, corporate website and electronic newsletters.</p> |
| <p>Continue with the development and implementation of Whitehorse City Council's ESD Planning Policy for inclusion in the Planning Scheme.</p> | <p>City Dev't</p> | <p>Amendment C130 came into effect on 19 November 2015.</p> <p>It refers applicants to the Built Environment Sustainability Scorecard (BESS) for developments. Templates and links to resources are made available to assist applicants prepare their Environmentally Sustainable Design (ESD) Plan.</p> |

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| <p>Continue current community and Council energy and water efficiency programs to encourage measures that reduce climate change risks related to energy and water consumption.</p> | <p>City Dev't</p> | <p><u>Council</u> Whitehorse City Council has signed an Energy Performance Contract (EPC) to fast-track installation of \$2M worth of energy efficiency upgrades at Council's highest energy consuming sites from 2019-2021. This will enable Council to achieve permanent energy and financial savings of more than \$275,000 annually, reduce greenhouse gas emissions by more than 1,300 tonnes and accelerate progress toward the carbon neutral target of 2022. Energy efficient and water saving devices are installed as replacement is required. Retrofitting with solar panels is being investigated through shared purchase schemes and for refurbishments. \$100,000 annual funding has been committed for sustainable energy initiatives, \$50,000 every two years for sustainable water initiatives and \$100,000 every two years for climate change risk adaptation. In addition: All new buildings are designed in line with ESD considerations Appointment of Utility Officer to identify energy savings Implementation of CCAP utility tracking program to log and report on our use of electricity, gas, water and fuel across 400 council assets. Council is currently part of a project to embed effective Water Sensitive Urban Design (WSUD) asset management processes within each council to improve asset condition and ease of maintenance.</p> <p><u>Community</u> Education: Seasonal Sustainable Living Workshop Series and other events, Whitehorse News, Sustainability Awards. Showerhead exchange program allowed residents to swap traditional for low flow appliances at Council's Civic Centre office – a collaboration with Yarra Valley Water. Participation in and promotion of Sustainability Victoria's Take 2 campaign that encourages residents and businesses to adopt actions that limit the risk of climate change. Delivery of Solar Savers in collaboration with Eastern Alliance for Greenhouse Action – an interest free loan scheme for the installation of solar panels. Promotion of state-wide solar rebate scheme.</p> |
| <p>Investigate opportunities for retarding or redirecting runoff from storms to reduce the risk of localised flooding.</p> | <p>City Dev't</p> | <p>WSUD principles are considered and where applicable are constructed as part of projects.</p> <p>Council is currently part of a project to embed effective Water Sensitive Urban Design (WSUD) asset management processes within each council, in order to ultimately improve asset condition and ease of maintenance. The report is currently in draft condition.</p> <p>As part of Council's streetscape improvement projects we have recently constructed a small scale WSUD project inclusive of tree bays being watered by diverting storm water from the kerb and channel into the tree bay.</p> |

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| <p>Continue to ensure that staff, volunteers (e.g. Food Services, walking school bus participants) and other outdoor specific staff are aware of the Council's occupational health and safety procedures regarding extremely hot weather and storm events.</p> | Comms | <p>Notifications are forwarded to senior staff regarding all severe weather warnings and staff on extreme weather alert notifications.</p> <p>Letters are sent to all Home and Community Care clients (4000) at the beginning of the hot weather season and memos to staff reminding them of OH&S procedures, the impact of heatwaves and precautions to take when working in hot conditions.</p> <p>Extreme weather alerts are forwarded to all staff and a process is enacted to send electronic messages to staff in the field. At risk clients are monitored by field and office staff during these times.</p> <p>Staff and volunteers are covered by the Thermal Conditions and Sun Protection Policy (OHS11) which outlines workplace and employee responsibilities to mitigate risks associated with thermal conditions and UV radiation.</p> <p>Emergency Plans for events are developed to ensure staff are aware of emergency procedures.</p> |
| <p>Review departmental budgets in light of climate change impacts, identifying funding changes that may be needed to address service delivery regardless of climate change and depending on specific needs/priority areas.</p> | Corporate Services | <p>As per budget process.</p> <p>Council resolved to establish an Energy Management Fund (EMF) as a funding source for the implementation of energy efficiency initiatives coupled with the study and establishment of commercially viable long-term sustainable renewable energy sources. The EMF provides a funding source for projects that reduce energy and fuel use and greenhouse gas emissions.</p> <p>It will reinvest the resulting financial savings back into the Fund to implement more energy-saving measures and carbon reduction projects.</p> |
| <p>Continue to conduct debriefs and post-event reviews following extreme weather events.</p> | Corporate Services | <p>Emergency event debrief protocols are detailed in the Municipal Emergency Management Plan and include assessing the adequacy of the plan and recommendations for amendments if required.</p> |
| <p>Review existing insurance arrangements to ensure that current insurance cover is appropriate for dealing with potential climate change impacts.</p> | Corporate Services | <p>Council owned buildings are insured under a current policy "Industrial Special Risks" which is administered through Risk, Health & Safety / Organisation Development and renewed annually. Building details are provided by Property and Rates. If a Council building is damaged from a storm event, a claim is made to the insurer if the damages exceed the policy excess.</p> |

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| <p>Continue to provide adequate safety and personal protective equipment (PPE) to staff to cope with a potential increase in the number of emergency incidents associated with an increase in the intensity and frequency of extreme events.</p> | Infrastructure | <p>Staff have access to all required PPE through the store at the Operations Centre.</p> |
| <p>Continue to liaise with sporting clubs regarding managing sustainable levels of use of sporting facilities as well as ongoing safety inspection and ground assessment regime.</p> | Infrastructure | <p>Ground audits currently performed on a monthly basis, taking into account surface conditions and playability of the ground. The issue of managing use on sports fields is a challenge. Realistically the grounds can tolerate around 15 hours per week before showing severe signs of wear. The majority of our grounds are getting at least 20 – 50 hours of use. There is now a much greater demand for sporting facilities and also to have them up to a suitable playing level. Council needs to build more grounds or start asking clubs to lower the amount of teams they have - both not feasible.</p> <p>One option is to start talking with schools for council to start maintaining their ovals and opening them up to sporting clubs for training. Continuous review of management techniques and any new products or initiatives that can assist in providing safe, quality sports fields for the users is considered. Example: We have installed synthetic run ups on most of our grounds to eliminate the wear and tear and safety issues that this caused. We are also installing a synthetic/natural turf combination product that would lessen the effects of high wear areas on sports fields. Whilst this is very expensive, the results thus far have been a much greater result for our sports field's</p> <p>Parks, Planning & Recreation are continuing their consultation with sporting clubs. They are providing us with strong feedback and the expectations from the community is greater</p> <p>(Updated; Justin Quinn 21/02/19)</p> |
| <p>Continue to implement and further develop a pest plant eradication program and incorporate any new trends.</p> | Infrastructure | <p>Dedicated in house team to manage invasive plant species in our remnant bush and more biodiverse reserves. Specialist contractors to undertake weed management and other biodiversity management tasks to a value of approximately \$300K per annum.</p> <p>In 2017/18 ParksWide undertook a biodiversity inventory that identified areas of high importance to inform and prioritise activities in the next 1 to 5 years.</p> <p>Weed management on private property is not currently addressed through ParksWide however, other council programs such as Gardens for Wildlife and the tree education officer align with the department to achieve this goal.</p> |

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| <p>Review existing Council design and construction standards to identify whether climate change is adequately considered and/or whether Council should advocate for or consider amending its standards. Review work practices and maintenance regimes to ensure that climate change is considered</p> | <p>City Development</p> | <p>Council's design and construction standards are based on industry standards. Drainage work practices and maintenance are continually reviewed as normal practice to respond to flooding events.</p> |
| <p>Continue to raise awareness among Council staff and volunteers of how climate change is likely to impact their service and work practices.</p> | <p>City Development</p> | <p>Council is an active member of Sustainability Victoria's Take 2 campaign which encourages workplace practices that will limit the impact of climate change. Staff will be invited to a presentation facilitated by <i>Drawdown</i> in March 2019. This will explore practical solutions and decision making tools that can be used to mitigate climate change. Council has a Thermal Conditions and Sun Protection Policy that applies to staff working outdoors. It outlines management and employee/volunteer responsibilities, as well as a commitment to the provision of training and Personal Protective Equipment.</p> |
| <p>Continue to work with and prepare the business community on environmental matters including climate change (e.g. the Lean Deployment Business Program).</p> | <p>City Development</p> | <p>Promotion of Sustainability programs in Down to Business (distribution 4000), including:</p> <ul style="list-style-type: none"> •E-waste (November 2018) •Green Money (ongoing) •Take-2 Program (November 2018) •Green Tips for an eco-friendly business (July 2016) •Sustainability Spotlight on RSPCA Victoria (July 2015) •Divestment Expo (February 2015) <p>Wbiz website promotion- Green Money program, Green Steps program, Victorian Energy Compare and Carbon Tax information Think Local Buy Local Radio Campaign E-bulletins and Down to Business promotion - Sustainable Business winners, "Your Say on Waste- Business Workshops" putting the Brakes on Carbon event. Delivering business workshops, including Green Your Business Grow Your Business, Mindful Shopping and Fair Trade Fortnight.</p> |

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| Continue to promote actions that the community can take to prepare private property for extreme events. | City Development | <p>Compliance have a communication plan that incorporates amenity, safety and emergency information. Key messages are provide at relevant times throughout the year.</p> <p>Reporting of blocked drains and other potential safety issues can quickly be reported through Council's online mechanisms, such as Snap, Send and Solve.</p> <p>Additionally Compliance engages seasonal staff to support its ongoing program to identify properties requiring clean up to reduce hazards directing works to be carried out and providing assistance</p> |
| When reviewing planning policies, structure plans, and Council's Municipal Strategic Statement, ensure that appropriate allowances are made for the increasing intensity and frequency of extreme events and changes in average climatic conditions, and the need to make private properties more sustainable in their energy and water use. | City Development | <p>This is ongoing as planning policies, structure plans and Council's Municipal Strategic Statement (MSS) are reviewed.</p> <p>The 2014-2017 review of the MSS includes an ongoing recommendation to advocate for a permanent ESD policy at the local level if not implemented state wide.</p> |
| Make use of the Victorian Government alert system for providing early warning to the community about the type and scale of extreme weather events with support from emergency service agencies (e.g. Melbourne's heat alert system). | Corporate Services | <p>The early warning alert system has been developed and mobile phone alerts are sent to people in a geographic area where a fire may have started. It's done via the Fire Agencies and the Telco's. Our residents will only receive notification if they are in that particular locality were the danger exists.</p> <p>A flood alert system has been developed for a number of residents in Laburnum through Melbourne Water. Melbourne Water, VicSES and Whitehorse City Council have been working with a number of residents in introducing a 3 phase warning system based on water levels in local drains. The first warning is to standby and check the BOM website, the second is prepare to implement the local flood plan and third warning is to implement the flood plan.</p> |

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| Ongoing review of existing emergency response systems and service delivery models in relation to climate change impacts, especially extreme weather events. | Corporate Services | <p>Whitehorse partners with emergency management responders and providers in developing municipal emergency planning and community resilience.</p> <p>It works closely with the eastern cluster of Council's in establishing regional partnerships and shared knowledge and resources.</p> <p>Regional arrangements are in place to review all emergency response, relief and recovery arrangements in addition to annual training and awareness programs</p> <p>The Whitehorse Municipal Emergency Management Planning Committee has reviewed Council's Emergency Management Plan in 2018 updating various segments.</p> <p>The Plan was last audited in 2017 and was found to meet the Guidelines issued by the Minister</p> |
| Review the Victorian Bushfires Royal Commission's recommendations regarding planning and responding to extreme weather events. Identify recommendations that are applicable to Whitehorse City Council. | Corporate Services | <p>Much of the Royal Commission recommendations apply to areas in CFA regions. Whitehorse is in the Metropolitan Fire District (MFB)</p> <p>The Whitehorse Municipal Emergency Management Planning Committee has reviewed Council's Emergency Management Plan including risk assessments in 2018 updating various segments of the Plan</p> |
| Continue to promote pest eradication and develop pest animal eradication program. | Corporate Services | <p>Management of pest animal species has continued on a proactive and as reported basis. ParksWide aims to extend the current program to include fact sheets and information sessions available to residents to increase awareness of pest animal issues and how residents can deter pest animals on their properties (2019/20 goal).</p> |
| Monitor financial implications of climate change policy measures such as carbon accounting or the Carbon Pollution Reduction Scheme (CPRS) and revise Council's financial policy as required. | Corporate Services | <p>The carbon tax was abolished on 17 July 2014 with effect from 1 July 2014 and as such, no carbon tax has been incorporated in budgets since then.</p> <p>For the years the carbon tax was in process, this was incorporated into relevant budgets, and any "savings" compared to budget were added into a new Waste Management Reserve. This reserve is being used to fund environmental land management projects.</p> |

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| Consider investment opportunities and payback periods when considering long-term climate change adaptation actions. | Corporate Services | <p>Council is an active member of the Eastern Alliance for Greenhouse Action. Several collaborative projects and funding opportunities for climate change adaptation actions have been realised through this alliance, including:</p> <p>Solar Savers – bulk purchase program for PV panels</p> <p>Energy Performance Contracts –negotiation of fixed price electricity supply for a portion of Council's use</p> <p>Lighting Upgrade – changeover of street lighting to energy efficient LEDs for long term energy savings.</p> |
| Advocate for the need to adopt a regional or shared approach to climate change adaptation with other local Councils and relevant stakeholders. | Executive | <p>The Regional Emergency Relief and Recovery Plan was developed by the Eastern Metropolitan Regional Emergency Management Committee with representatives from 8 municipalities in partnership with the Department of Human Services. The Plan outlines a 5-year regional approach to emergency management. The City of Whitehorse Municipal Emergency Plan 2017 considers risks and response to emergencies, as well as increasing community resilience. It was developed in conjunction with assistance from Victoria State Emergency Service and Victoria Police.</p> |
| Review staff resourcing requirements and consider making allocations on a seasonal basis. | Executive | Address as required |
| Advocate and apply for climate change adaptation funding opportunities where these are available. | Executive | <p>Ongoing – including collaboration with other councils's for Electric Vehicle Study, Energy Performance Contract and Power Purchasing Agreement negotiations.</p> |

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| Review the Whitehorse City Council Heatwave Research Report to identify recommendations related to climate change adaptation which could be implemented. | Human Services | Included as part of Emergency Management and HACC client practices. |
| Review drought management actions and if required develop a specific drought management plan to ensure that this includes adequate climate change adaptation measures. | Infrastructure | Use of warm season grasses where appropriate to help reduce the dependence on water and aid in turf recovery. |
| Review the availability and capacity of contractors and volunteers to provide extra resources during and following extreme weather events. | Infrastructure | Explored as required |
| Identify further opportunities for stormwater use and wastewater recycling within the municipality, including Water Sensitive Urban Design. | City Development | <p>Construction of tree bays being that use storm water from the kerb and channel.</p> <p>Consideration of WSUD principles for all projects and design:</p> <ul style="list-style-type: none"> -Capturing rainwater to flush toilets - Water efficient sanitary fixtures - Design of permeable areas around buildings -Swales and landscape solutions for drainage <p>Investigation of water harvesting for Valda Avenue wetlands as a potential irrigation source for neighbouring sports fields.</p> <p>Key projects undertaken:</p> <ul style="list-style-type: none"> -Kalang Park Pavilion: a swale drain was used to capture and funnel storm water from LPOD's from the adjacent properties along the boundary. -Livingstone Pavilion: landscaped solution to mitigate flooding risk Mont Albert Pavilion –water tanks connected to a solenoid at the grass pitch for watering. Boongarry Ave – ephemeral wetland created to treat stormwater -Box Hill Gardens – stormwater harvesting to protect trees during periods of drought -Bolton Park: underground storage for harvested stormwater for Box Hill Oval. |

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| Encourage localised food production to reduce dependence on centralised distribution systems that are more vulnerable to impacts from climate change. | City Development | Council supports Whitehorse Urban Harvest and promotes their monthly program of food swaps. They also have community gardens in Forest Hill and North Blackburn. |
| Consider establishing arrangements for temporary adult and childcare facilities to be set up for assisting Council staff to attend work during extreme events. | Corporate Services | |
| Explore opportunities to fund the SES to provide additional assistance during and after extreme weather events. | Corporate Services | |
| Consider upgrading sports field surfaces to artificial or more water efficient surfaces over time, where applicable and cost-effective. | Human Services | <p>With the high usage level and demand on some of our sports field's there is definitely a need to upgrade some of them to a full synthetic field. An example of this is Spark's Soccer. This is an oval that is used 5 nights a week for training for both Men's, Women's and Junior training. The majority of the time they will have 4 separate teams training on the oval</p> <p>We have so many pavilions that could be used to capture water as rain harvesting systems to water our sporting fields. Currently council only have one facility at Bolton St that irrigates Box Hill City Oval.</p> |
| If the current usage arrangements for sporting fields become unsustainable, explore potential different uses for sports fields or alternative scheduling arrangements. | Human Services | Whitehorse is landlocked and we have a higher demand from the community for more sporting fields. Alternative scheduling in the community is probably not an option at all. The majority of our sports are played on grass fields. Unless we go to dry synthetic pitches then we will have a demand on water |

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| Retrofit Council assets to be more energy and water efficient and address any structural issues identified in vulnerability assessment. | Infrastructure | <p>Energy efficiency retrofits – installation of solar analytics to monitor energy use and increase solar performance; and continue upgrading lights to LED.</p> <p>Water efficiency retrofits – installation of water tanks at ParksWide Nursery and Operation Centre to further reduce consumption on mains water; and installing monitoring controllers to track usage and savings.</p> |
| Consider providing additional funding to help manage increases in capital expenditure (e.g. investments in improving the resilience of infrastructure) and operational expenditure (e.g. increasing insurance costs and responding to extreme weather events) caused by climate change impacts. | Infrastructure | <p>Scope of works have been provided by consultants on the new back-up generator (to provide business continuity in preparation for/during extreme weather conditions) at the Operation Centre, and invitations to quote have been sent to contractors.</p> <p>Works will be undertaken should budget allow, otherwise it will be implemented in the next budget cycle.</p> |