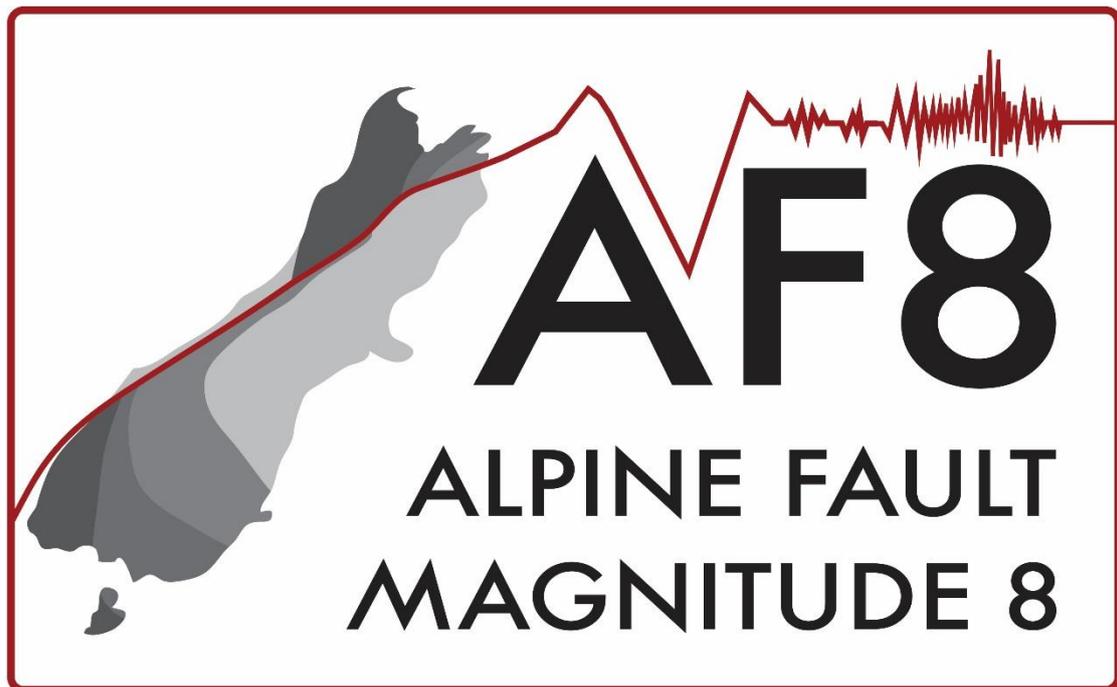


PROJECT AF8

YEAR 2 PROJECT REPORT

‘Developing a coordinated response to an Alpine Fault rupture to assist and enhance community resilience across the South Island’



September 2018

Executive Summary

Year 1:

Year 1 commenced with the Science Workshop in October 2016, which provided the persuasive and pragmatic impact scenario basis for the 6 CDEM Group area planning workshops that followed in 2016 to mid-2017. The workshops brought together a wide range of between 30 and 130 emergency response stakeholders in each South Island CDEM Group area, to explore the impact, consequences, needs, and necessary response actions and resources for the first week of response to a major Alpine Fault earthquake and associated aftershocks.

The responses to and consequences of the Hurunui-Kaikoura earthquake sequence in November 2016 required a flexible approach to Year 1 project activities, but also added considerable focus and impetus to the project. The expedited review of the Wellington Earthquake National Initial Response Plan (WENIRP), because of the Hurunui-Kaikoura quakes, necessitated closer collaboration between WENIRP and Project AF8.

Year 2:

Year 2 of Project AF8 focussed on developing the South Island Alpine Fault Earthquake Response (SAFER) Framework in detail, through functional workshops with key stakeholders and a collaborative writing process.

A project to produce several short videos for release online was completed along with longer, more detailed science talks. These videos are intended to assist Groups in talking to local communities and to continue to raise awareness of the Alpine Fault hazard.

Work with GNS science was undertaken to produce impact predictions from their RiskScape modelling package. Understanding the limitations of the modelling and using these outputs appropriately will provide guidance for the planned national exercise in late 2020.

The success of Project AF8 and the SAFER Plan into the future will depend on an effective implementation strategy that was developed in the second half of Year 2.

A successful bid for year 3 funding was made, allowing the recruitment of an AF8 Coordinator.

Year 3:

Year 3 of Project AF8 will see the transition from a project to produce a response plan to a longer-term sustainable programme of work.

The main priority will be to launch the SAFER framework and socialise it with the stakeholders who contributed to its development. Incorporating the implementation plan into work programmes will also take place.

Work towards the national exercise will begin and scientific input into the RiskScape results to ensure they are robust and appropriate will take place.

We will continue to develop and promote science outreach and community engagement with a refresh of our website and social media platforms and exploring ways to record and distribute presentations to a wider audience.

Securing longer term funding for the future of AF8 will also take place this year.

Project Governance & Management

Governance for the project is provided throughout by a steering group made up of representatives of all 6 South Island CDEM Group offices, South Island Regional Emergency Management Advisers (REMAs) and national office Policy and Planning personnel from the Ministry of CDEM, and an observer from the Wellington Regional Emergency Management Office (WREMO). The steering group meets either face to face or virtually approximately every 2 months, approving all project variations and ensuring a coordinated approach between project partners. The governance group is chaired by the Manager of Emergency Management Southland (EMS), Angus McKay, who also acts as the project executive.

Emergency Management Southland is the administering authority for Project AF8.

Overall project management is provided by the Project AF8 Programme Manager, Jon Mitchell. Mr Mitchell is based in Wellington, enhancing connection between the project, MCDEM, and other national-level stakeholders, and travels to South Island locations as and when required. The Risk Science component of the project is led by Dr Caroline Orchiston, University of Otago. The project plan for year 2 is attached as Appendix 1.

Finance

Project AF8 has received the following funding from the MCDEM Resilience Fund:

1 July 2016 annual budget of \$245,000

1 July 2017 annual budget of \$245,000

1 July 2018 approval for annual budget \$170,000

Apart from staff costs, major financial commitments in year 2 have been the public education video project (approx. \$25,000) and the RiskScape work (\$20,000). Final spend for year 2 was \$248,000 with the additional expense being covered by EMS.

An outline report on financial performance for the project in Year 2 is attached as Appendix 2.

Risk Science Component

Dr Caroline Orchiston, Centre of Sustainability, University of Otago has continued to lead the Risk workstream for Project AF8.

The appetite for science outreach continues to grow and to date we have presented to over 4,000 members of the public across New Zealand.

Prof Tom Wilson of the University of Canterbury and his team assisted in the development of the RiskScape outputs and have also been a key part of our science outreach work.

A co-authored paper was published in the New Zealand Journal of Geology and Geophysics entitled, 'Project AF8: developing a coordinated, multi-agency response plan for a future great Alpine Fault earthquake.' This was a special issue edition of the journal focussing on the Alpine Fault Tricentenary: 300 years since the 1717AD event.

We continue to benefit from significant co-funding for the science input from the Resilience to Nature's Challenge and QuakeCore. It is hard to measure the exact monetary contribution, but it is certainly well in excess of \$100,000.

Application for Year 3 Funding

A detailed application for the third year of the project was made to the National Resilience Fund in October 2017 (see Appendix 3). Approval was announced by the Minister of Civil Defence in April 2018.

A South Island or nation-wide SAFER exercise will also be developed, to validate the SAFER, assess concurrent capability development initiatives, and identify further opportunities to improve response capabilities and capacities. The Alpine Fault response exercise is now in the National Exercise Programme, as a Tier 4 exercise scheduled for late 2020.

Response Planning Component

The South Island Alpine Fault Response (SAFER) Plan is the primary output of Project AF8. The final document can be found at this address:

www.projectaf8.co.nz/wordpress/wp-content/uploads/2018/09/af8-safer-framework-sept18-lr.pdf

Project Communications and Public Information Management

A communications plan was developed for the project, under the guidance of Michele Poole, then Queenstown Lakes District Council Communications Manager and now Otago Regional Council Strategic Communications Director.

Publicity for the project has been by way of media releases prior and/or after key project activities and milestones, with due regard being taken to sensitivities following the November 2016 Hurunui-Kaikoura earthquake sequence. These releases and local discussion of project activity, particularly the planning workshops, sparked media interest and then wider community interest in the project.

A Facebook page (projectaf8) and website (www.projectaf8.co.nz) were set up for the project in late 2016. These have proven very useful tools in communicating the work of the project.

Social media coverage of the project activities by mainstream media, particularly by the Press, has provided an opportunity to engage directly with online readers. The programme manager engaged in direct conversation with reader's questions or concerns, further expanding the social media reach and credibility of the project.

A rigorous tender process was undertaken to identify a video production company to produce several short videos to facilitate public engagement to the AF8 work. This was completed in February 2018 and launched with the assistance of Radio New Zealand.

Wellington Earthquake National Initial Response Plan (WENIRP) Linkages

The earthquake sequence that commenced with the Hurunui-Kaikoura quake on 14 November 2016 caused considerable damage in the Wellington area, as well as the North-East of the South Island. Although no-one was seriously injured in the Wellington area hundreds of buildings were damaged, requiring short and long-term evacuation of tenants, several multi-storied buildings were demolished as a result, and the Wellington port facilities and adjacent buildings were seriously damaged.

This Hurunui-Kaikoura quake prompted the review of the 2010 WENIRP to be expedited. This has provided an opportunity to align the SAFER Plan with the revised WENIRP and the Wellington Regional Earthquake Response Plan being developed in parallel by WREMO.

Project AF8 (Alpine Fault Magnitude 8): Project Plan

Updated 14 May 2017

Overview

This document provides a detailed plan for the development of the 'Project AF8' (Alpine Fault Magnitude 8) Project and associated work programme. The Project is supported by the National Resilience Fund and South Island CDEM Groups. The aim is to build on current knowledge and understanding of the likely consequences, throughout the South Island, from a major rupture of the Alpine Fault, to develop an initial response plan for a possible Alpine Fault earthquake.

Alpine Fault earthquakes are relatively frequent events, with evidence of at least 26 large earthquakes in the last 8,000 years, with a return period of approximately 300 years. It is now 300 years since the last rupture in 1717. Research indicates that there is a 30 to 50% chance of a significant quake occurring within the next 50 years. This project brings together the science community and emergency management practitioners to plan and prepare for a likely significant earthquake in the South Island.

A combined South Island response plan will provide greater coordination between CDEM Groups and identify any gaps and inter-dependencies in individual Group Alpine Fault response plans, as well as in national agency arrangements.

Emergency Management Southland will co-ordinate this work by completing a number of deliverables aligned with the work programme attached to this plan.

This project plan is supported by the AF8 Terms of Reference (TOR) attached in Appendix 1.

Aim and Objectives

To improve the resilience of communities in the South Island of New Zealand exposed to a potential, major rupture of the Alpine Fault. In order to achieve this, the Project will:

- Review and assess existing information and develop consistent, understanding of possible consequences, throughout the South Island
- Develop a South Island-wide initial response plan to guide immediate responses to such an event
- Inform preparedness and response capability development for appropriate risk management at the local, regional and national levels.

Scope

The Project will focus on two work streams;

- 1) Risk: hazard understanding, consequences modelling & risk communications
- 2) Response: management, planning & coordination.

Subsequently, the following will be included within the scope of this project:

- creating an inventory of existing research and knowledge of the hazard and associated risks, including likely cascading hazards and risks e.g. liquefaction and landslides
- developing scenario models to assess the likely consequences from credible rupture events, to determine the risk from these scenarios;
- assessing the impacts on key lifelines infrastructure to an extent that they will determine response priorities in the plan;
- identifying and prioritising needs for response actions across all South Island CDEM groups for the initial response phase after an Alpine Fault earthquake and aftershock sequence;
- identifying potential constraints, conditions and limits that the consequences of Fault rupture and cascading hazards/risks (by type and scale) may pose for formulating and carrying out response priorities and actions;
- an overview assessment of existing capacity and capability within regions to respond with the aim of identifying key gaps, issues and resource overlaps (including exposing any false assumptions in this regard);
- identifying and prioritising aspects where pre-planning for coordinated and integrated arrangements across regions and the national level is most needed;
- establishing planning for these arrangements by gaining understanding, commitments and documentation for an initial response plan, that enables the ongoing development, implementation and maintenance of such arrangements;
- carrying out phase one implementation of the arrangements, as either further described in this plan or agreed to as part of the project process (e.g. an exercise, public communications, resource registers);
- setting in place arrangements for long-term, multi-stakeholder coordination of research, policy and operational arrangements to manage the risks from Alpine Fault rupture across the 4Rs, and;
- establishing a common picture of strategic priorities for ongoing and/or new research on the hazard and risks, that aligns with CDEM planning and operational needs, to inform research programmes at the national and local level.

It is pertinent to discuss the limitations of the Project due to time, resourcing and required deliverables. As such, the following is not included in the scope of this Project:

- undertaking new or extended research into the Alpine Fault hazard (or cascading hazards). Such research needs may be identified, and could form part of wider research proposals through alternative funding streams or individually commissioned by South Island CDEM groups or partner agencies;
- development of core modelling capabilities (e.g. University of Canterbury quake impact modelling) that are ordinarily funded through other means;
- detailed assessments of vulnerabilities and consequences of localities or that relate to a specific organisation's needs that are not required for 'overview' modelling. This level of assessment remains the responsibility of relevant councils or organisations to undertake/commission from research providers (e.g. a lifeline utility critical infrastructure company's specific risk assessment);
- detailed reviewing and development of recommendations for remedial actions within specific organisations at the local, regional or national levels (though recognising that this is a potential outcome from the project that participating organisations may individually undertake or advocate for);
- formalised and fully integrated response management and action planning to follow after an initial response to an event. This response management is based on pre-existing national and CDEM Groups' generic arrangements, and will otherwise be tailored to the actual consequences, needs and capabilities in play at that time and;
- while the project is to fit within a risk-based 4Rs approach to managing this risk and the work may suggest areas for mitigation and recovery policy, planning and programmes, this further work is not within scope.

Deliverables/Milestones

The following deliverables are high level outputs only and are supported by the work programme in Appendix 2 of this plan. Other outputs aligned with the items below are detailed in the work programme.

Year One

This stage will focus mainly on reviewing current work and agreeing key principles and content for the Project. In addition, the following will be achieved:

- Inventory report of current Alpine Fault hazard and risk research.
- A set of scenario models for Alpine Fault rupture that covers, north to south and south to north rupture scenarios, and an aftershock sequence with any secondary hazard consequences and risks likely to be encountered during the initial response phase of an event and that could influence response management. (Note: longer-term consequences that may affect recovery, for example land damage and changes to river catchment drainage, are out of scope)
- Flexible (rather than set) scenarios that offer some 'if not this, then this' options. For example, a Milford Sound landslide-induced tsunami from the main shock versus a heightened risk of such from an aftershock will, in turn, lead to different response issues to consider.
- Report of identified response needs and priorities within each Group area for the initial response phase of an event.
- Assessment report of existing capability and capacity for response management, and identifying the key gaps and issues to collectively address.
- A shared working space for Steering Group Members.

Year Two

Following confirmation of the approval for year two of the Project, the following will be completed:

- A South Island Alpine Fault Earthquake Response (SAFER) plan (including MoUs etc.) based on likely South Island-wide Group and national priorities and needs.
- An Alpine Fault rupture response exercise.
- Community resilience public education resources and on-going strategy.
- A Project exit strategy to guide ongoing activity in management of the Alpine Fault hazard and risks.

Governance structure

To enable an informed and comprehensive approach drawn from a variety of skills and experience, a Steering Group and Project Teams will be developed to support the Project and its deliverables.

Steering Group

The overall Project will be chaired by Angus McKay, Group Manager, Emergency Management Southland. The Steering Group will comprise the following members:

Name	Role	Organisation
Angus McKay	Group Manager/Chair	Emergency Management Southland
Brain Patton	Group Manager	Marlborough CDEM Group
Chris Hawker	Group Manager	Otago CDEM Group
TBA	Group Manager	West Coast CDEM Group
Neville Riley	Group Manager	Canterbury CDEM Group
Roger Ball	Group Manager	Nelson/Tasman Group
Jenna Rogers	Analysis & Planning Manager	MCDEM
Caroline Orchiston	Deputy Director Centre for Sustainability	University of Otago

Roles and responsibilities of Steering Group members are defined in the AF8 TOR. Delegates may attend meetings/participate in the Steering Group's business as and when agreed by their organisation's member and the Chair

Project Team leaders are to attend Steering Group meetings as advisers/observers.

Project Teams

The work programme includes two streams:

1. RISK: Hazard understanding, consequences modelling & risk communications team

This stream will primarily be comprised of researchers and technical experts.

Caroline Orchiston (Team Lead)	Deputy Director, Centre for Sustainability	University of Otago
Tom Wilson	Senior Lecturer	University of Canterbury
John Townend	Associate Professor and Head of School	Victoria University
Kelvin Berryman	Principal Scientist	GNS Science
Jon Mitchell	AF8 Programme Manager	EMS
Sarah-Jayne McCurrach	Team Leader, Hazard Risk Management	MCDEM
Chris Hawker	Group Manager	Otago CDEM
Angus McKay	Group Manager	EMS

Regional Council hazard analysts will be included as required through the CDEM Group Managers.

2. RESPONSE: Response management, planning & coordination team

This stream will primarily be comprised of CDEM Group representatives with CDEM operational and planning expertise.

Jon Mitchell (Team Lead)	AF8 Programme Manager	EMS
Angus McKay	Group Manager/Chair	EMS
Brain Patton	Group Manager	Marlborough CDEM Group
Chris Hawker	Group Manager	Otago CDEM Group
TBA	Group Manager	West Coast CDEM Group
Neville Riley	Group Manager	Canterbury CDEM Group
Roger Ball	Group Manager	Nelson/Tasman Group
Alex Hogg	Team Leader, National Planning	MCDEM
Simon Chambers	REMA	MCDEM
Caroline Orchiston	Deputy Director Centre for Sustainability	University of Otago

Project Teams may co-opt additional members and/or form sub-units as necessary. They may also link and coordinate with other existing organisational structures for example lifelines groups, emergency services & NGO emergency responders, either regionally through their CDEM Group structures or on South Island-wide via an appropriate representative structure.

Any Project Teams will be responsible for ensuring the work programme is accomplished, and will be chaired by the Programme Manager, Emergency Management Southland. The Programme Manager reports to the Steering Group via the Chair and is responsible for coordinating the Project work streams, and facilitating the timely production of all Project deliverables. As the Project progresses, the Project Teams may expand to include relevant agencies with the required skills and expertise.

It is anticipated the Project Teams will include members of the MCDEM National Planning Team, emergency services and other agencies required for the development of an initial response plan. The Project Teams may also link and coordinate with other existing organisational structures for example lifelines groups, emergency services and NGO emergency responders, either regionally through their CDEM Group structures or South Island-wide via an appropriate representative structure.

MCDEM may also coordinate inputs from national agencies in accordance with National CDEM Plan arrangements, and will also facilitate addressing specific issues or interests arising that may require a national perspective e.g. for the tourism sector.

Management

Management of the Project will be the responsibility of the Steering Group, driven by the Chair of the Project. This will include identification of resources, reporting, budget management and identification of any unforeseen expectations, performance issues or potential problems that might arise during the Project.

Monitoring and reporting

The Programme Manager will provide the Steering Group with bi-monthly reports which shall include progress against milestones, budget tracking, foreseeable issues and opportunities. The report will be made available to the Steering Group at least 5 working days prior to their meeting. Whenever possible the Programme Manager will attend the meetings of the Steering Group.

The Project Chair shall provide 3 monthly reports to MCDEM and shall conform with all Environment Southland reporting, financial and HR policies and procedures as required.

The Steering Group will share the reports with the key stakeholders of the project including the science and Ministry leaders.

Resources

Funding for the project will be held with the Southland CDEM Group which will approve all expenditure in a business as usual manner. Significant project costs not previously provided for in the project plan will be approved by the Steering Committee members. Each South Island Group will provide for their own costs necessary to ensure the success of the Project except where the Group members agree to fund costs from the Project e.g. travel and accommodation costs.

Communication requirements

The Programme Manager led the development a communications plan in consultation with the Steering Group in Year 1. This includes opportunities to initiate national/South Island media releases as information becomes available or when milestones are delivered. Newsletters may also be produced for delivering information on the project to wider stakeholder groups e.g. Lifelines. South Island Group members will initiate similar releases with a local focus. An AF8 specific website www.projectaf8.co.nz and Facebook page #projectaf8 were developed in Year 1 specifically targeted to engage with the South Island public.

Finance

Funding for this Project is provided from the National Resilience Fund. A breakdown of costs and budgets for this Project are included in Table 1 and 2 below:

Table 1. Work Programme Year 1.

Description	Notes	Budget	Milestone	Date	Cost
Programme Manager Salary, support costs, travel etc	Full-time, fixed term programme manager	\$150,000	Ongoing cost through the year, based on salary, support costs and travel etc. Progress will be monitored on following milestones:		
			<ul style="list-style-type: none"> Satisfactory completion of 6 CDEM workshops 	Bi-monthly	5,000 per workshop, 30,000 total
			<ul style="list-style-type: none"> Completion of year 2 application (if required) 	Oct 2016	-
			<ul style="list-style-type: none"> Completion of reporting to SG meetings 	Bi-monthly	10,000
			<ul style="list-style-type: none"> Completion of comms plan for Project AF8 	Oct 2016	10,000
			<ul style="list-style-type: none"> Collating information used for scenario development and producing a guide to earthquake research for CDEM Groups 	Dec 2016	20,000
			<ul style="list-style-type: none"> Building on existing Group work on local impacts and initial response plans, collating these and reporting 	Dec 2016	40,000
			<ul style="list-style-type: none"> Building on existing Group resources lists, collating these, identifying inter-dependencies and producing a standard format for resource registers. Report on same. 	April 2017	40,000
			<ul style="list-style-type: none"> First Year report 	June 2017	10,000
Admin support, printing etc	5 hours per week, plus incurred costs	\$25,000	Ongoing cost through the year		6,250 per month
Scenario definition, workshop attendance and accommodation		\$20,000	Likely Scenarios, impacts and subsequent events	Oct 2016	20,000
Travel and accommodation for Steering Group meetings /workshops held around 6 CDEM Groups	Approx 10 people: Flights \$500 Accom \$300 6 meetings	\$50,000	6 meetings across year, combined Steering Group and workshops in each CDEM Group area	Bi-monthly	8,333 per meeting
Total		\$245,000			\$245,000

Table 2. Work Programme Year 2.

Deliverables		
Milestone	Date for completion	Cost
2017/18 – Risk Workstream		
<ul style="list-style-type: none"> Continue likely scenario modelling. Postdoctoral student over two years (annual contribution from Resilience Fund, total cost \$150k per year co-funded from other organisations) 	Jul 2018, on-going	\$20,000
2017/18 – Response Planning		
<ul style="list-style-type: none"> Review Year 1 outcomes 	Jul 2017	\$12,500
<ul style="list-style-type: none"> Identify future work programme and on-going governance arrangements for Project AF8 	Aug 2017	\$12,500
<ul style="list-style-type: none"> Identification and collation of all stakeholder plans for Alpine Fault responses 	Sep 2017	\$12,500
<ul style="list-style-type: none"> Detailed interviews with stakeholders – developing SAFER Plan components 	Oct 2017	\$12,500
<ul style="list-style-type: none"> Establish MoU's between stakeholders for 'cross border' support 	Nov 2017	\$12,500
<ul style="list-style-type: none"> Confirm roles and expectations of MCDEM, CDEM Groups and partner organisations in responding to a significant Alpine Fault earthquake 	Dec 2017	\$12,500
<ul style="list-style-type: none"> Draft SAFER Plan write up + review 	Feb 2018	\$25,000
<ul style="list-style-type: none"> Draft SAFER Plan workshop + socialisation 	Mar 2017	\$12,500
<ul style="list-style-type: none"> SAFER Plan finalisation + publication 	Apr 2017	\$12,500
<ul style="list-style-type: none"> Design + conduct SAFER Plan Exercise 	May 2018	\$19,000
<ul style="list-style-type: none"> Final Project Report 	Jun 2018	\$6,000
	Reported Monthly	\$150,000
Community Resilience – Public Education		
<ul style="list-style-type: none"> Produce common Public Education community resilience messaging and means of delivery. Engage additional resource of required. 	Dec 2017	\$30,000
Project Administration + Travel		
<ul style="list-style-type: none"> Project admin, consumables, printing, etc. 	Reported Monthly	\$25,000
<ul style="list-style-type: none"> Travel and associated costs 	Reported Monthly	\$20,000
	TOTAL	\$245,000

Risks and Issues

It is important that any risks or issues that might arise during the Project are understood and recorded. This includes detailing their causes, possible consequences and any solutions or actions taken to resolve the issue. The following risks or issues could impact on the timeframes or quality of the project:

- **Risk 1:** Programme of works (tasks & deliverables) grows too broad or loses focus during the life of the project.

Required management:

- Programme Manager to maintain systems to specify work criteria and timeframes, monitor progress, and to report to the Chair on any variations or issues arising.
 - Project Chair is to regularly brief Steering Group on progress, and seek agreement on any significant variations to the programme of works.
 - Steering Group to report to sponsor and governance structure as required.
- **Risk 2:** Programme Manager, consultants or task leads do not get sufficient or timely inputs from participating organisations.

Required management:

- Issue elevated to relevant Steering Group member to address through their Region's executive and governance arrangements. Wide spread or persistent lack of support that jeopardises the project as a whole is to be addressed through the steering group's combined reporting to the governance structure.
- **Risk 3:** Project Chair, Manager, or task lead becomes indisposed and unable to complete their work.

Required management:

- Progress on all work is well-documented and routinely stored within shared or openly accessible data storage systems. The Programme Manager and Chair are to be kept informed ASAP of pending or potential issues and are to undertake contingent actions accordingly.
- **Risk 4:** A major emergency occurs that impacts BAU activities of key organisations and personnel involved in this project.

Required management:

- Project timeframes or personnel commitments may be re-negotiated between Programme Manager and the Steering Group/sponsor.
- Non-impacted organisations are invited to fill gaps where practicable to do so

Success Factors

The overall success of the AF8 Project will be its ability to develop a holistic initial response plan for a major rupture of the Alpine Fault, which demonstrates leadership and co-ordination from all affected South Island CDEM Groups. Success will also be demonstrated through the deliverables and milestones required to meet the response plan over the two-year development period which may also include:

- Raised awareness, and consistent understanding, of potential consequences from credible Alpine Fault rupture scenarios and aftershock sequences, based on the best available scientific knowledge and research
- Common understanding among response agencies of likely needs and management priorities during an initial response to such events
- Overarching planning frameworks that support the development and maintenance of coordinated and integrated readiness and response arrangements for such events.
- An appropriate strategy for risk management that considers management, development and investment decisions is critical to the success of the framework. Note that a robust, transparent, layered framework will also support better national understanding of risk, strengthened risk management, increase risk information and awareness, help to identify underlying risk drivers and areas for investment in disaster risk reduction.
- Agreement between CDEM Groups on the initial priorities for recovery agencies and the resources required to carry them out.
- Consultation with agencies affected/involved in the response so that a clear understanding is gained on the ability of each Group to provide for its own and other's needs.
- Evaluation of current plans, agreements and resources available to respond to such an event.
- Successful quarterly reporting to MCDEM – Project sponsors through the National Resilience Fund
- Presentation of the findings to key stakeholders, responding agencies, the science fraternity and the public.
- Submission of the findings to Central Government with a view to improving the resilience of those communities and lifelines likely to be seriously impacted by such an event.

Year 2 Finances

Appendix 2

Year 1 Invoice	\$189,418
Year 2 Expenses	
Staff Costs	126,495
Travel	65,123
Printing and Stationery	1,958
Advertising	350
Catering	3,315
General Expenses	5,723
Contractors	45,517
Year 2 total	\$248,481
Project AF8 total end year 2	\$437,899



CDEM Resilience Fund project application Appendix 3

This form provides the minimum of information for the application; a detailed project plan should be developed to inform this application and may be attached.

Project title	Project AF8
Date of application	26 September 2017
Details on application	
Applicant	Emergency Management Southland
CDEM Group/s affected	Nelson/Tasman, Marlborough, Canterbury, West Coast, Otago, Southland
Other local authorities, Groups or organisations supporting this proposal	MCDEM, University of Canterbury, University of Otago, Victoria University and GNS science
Project description	
Executive summary <i>[200 words maximum description.]</i>	
<p>This application is for the financial year 2018/19 and follows the successful applications for funding in the previous 2 years to develop a South Island Alpine Fault Emergency Response (SAFER) plan.</p> <p>The Alpine Fault extends 450km along the spine of the South Island and forms the boundary between the Australian and Pacific Plates. The fault has a history of generating large (magnitude 8) earthquakes at regular (300 year) intervals. The last Alpine Fault rupture being in 1717 and the current prediction putting the probability of the next rupture being between 30-50% in the next 50 years.</p> <p>To date the project has successfully brought together science and emergency management planning to identify consequences of a magnitude 8 Alpine Fault earthquake for all CDEM groups in the South Island and identify coordinated initial response actions for CDEM groups. It has also identified many gaps in our preparation which will require further coordinated work.</p> <p>Until Project AF8 was initiated in 2016, each CDEM Group worked largely in isolation preparing plans and commissioning scientific work on a relatively ad-hoc basis. The scale of an Alpine Fault event will impact all Groups and will necessitate a nationally coordinated response.</p> <p>Having made such tremendous progress over the last 2 years, the aims of this application are to;</p> <ul style="list-style-type: none">• build on the cross-regional cooperation and planning approach developed over the last 2 years• maintain the excellent working relationships between science and CDEM• continue to work towards a tier ¾ exercise on Alpine Fault rupture• develop a capability to coordinate scientific research on the Alpine Fault• implement the public education and community engagement tools developed during the first 2 years of Project AF8• transition into a long-term programme, securing funding and develop a terms of reference for 'Programme AF8' (being the long-term programme as opposed to the resilience funded project)	
Challenge/opportunity <i>[200 words maximum description.]</i>	

The opportunity to coordinate both the CDEM planning and the scientific work around the Alpine Fault under one steering group has proven to be of tremendous benefit over the first two years of Project AF8. Project AF8 will have achieved:

- A substantial improvement in awareness and understanding of the impact and consequences of Alpine Fault earthquakes
- Improved communication between CDEM and the science community
- An understanding of the current readiness and response situation
- The foundations for a robust initial earthquake response plan (SAFER plan)
- Improved community engagement and public education tools
- A significant gap analysis for inclusion in Group and National future work programmes

The challenge for year 3 onwards is to maintain the momentum, continue to coordinate our work across the South Island, influence national planning and to maintain the emphasis on preparing for an Alpine Fault rupture. This is not a case of 'if' the Alpine ruptures, but 'when' and every year the chances of it happening increase accordingly.

Projects such as DEVORA, It's our Fault and East Coast Lab have shown the benefits of a long-term commitment to address important, nationally significant, hazards. We must transition from Project AF8 to a long-term Programme AF8 that builds on our foundations and keeps the Alpine Fault at the top of our priorities.

Our intention is to continue to build on these relationships into the future, which will significantly enhance the resilience of New Zealand to a future Alpine Fault event.

Alignment with identified goals and objectives identified in the CDEM sector [\[200 words maximum description.\]](#)

The National CDEM Strategy sets out the overall direction for CDEM in New Zealand. It has a vision: *Resilient New Zealand: communities understanding and managing their hazards.*

The National CDEM Plan aims to integrate and align agencies' CDEM planning and related operational activities at the national level.

Other CDEM regional plans have similar goals and objectives. For example, Southland CDEM Group Plan is aligned to other group plans across the country, and contains sections of particular relevance, such as;

Reduction

1.1 Improve understanding of Southland's hazardscape and associated risks and consequences

1.2 Undertake long term strategic reduction of the risks from hazards through collaborative planning with stakeholders

Readiness

2.4 Communities are made aware of the risks and understand how to mitigate and respond

Response

3.6 Enhancing the ability of the community to prepare (for) and manage emergencies

This project closely aligns with all of these plans and objectives, providing a comprehensive and coordinated platform for increasing community resilience across the 4Rs.

Recovery

4.2 Promote coordinated and standardised recovery activities amongst the partner agencies

Dissemination of benefits to sector *[200 words maximum description.]*

Project AF8 has raised awareness, improved cooperation across regional boundaries and started the conversations around preparing for an Alpine Fault rupture with the creation of the SAFER plan. There is a danger, that unless we continue to resource this coordination, the progress we have made will be lost.

As six separate CDEM Groups we are starting to think collectively and to change our systems to recognise that in an emergency, events do not recognise artificial borders. Whether that is caring for displaced tourists, pre-planning for South Island wide reconnaissance flights or approving key staff to work out of their region, the benefits of Project AF8 are huge.

We have also seen a tremendous commitment from the science community to accommodate emergency management into their planning and to tailor their approach to meet the needs of CDEM groups. The value in continuing to offer a central programme that can coordinate and prioritise our engagement with this key group of stakeholders cannot be over emphasised.

The SAFER plan needs to be embedded in all six Groups' response planning, tested during an exercise and the gaps and opportunities worked on for the future. The opportunity to secure funding other than that from the Resilience Fund would also provide stability and give a capability that cannot be funded from the Groups alone.

Project design

Project manager	Angus McKay, Regional Manager, Emergency Management Southland
Other project members	<ol style="list-style-type: none"> 1. Nelson Tasman CDEM Group 2. Marlborough CDEM Group 3. Canterbury CDEM Group 4. West Coast CDEM Group 5. Otago CDEM Group 6. Southland CDEM Group (Chair) 7. MCDEM 8. University of Otago (team leader) 9. University of Canterbury 10. Victoria University 11. GNS Science
External providers/contractors	Universities, GNS Science, National Lifeline Utilities, EQC

Deliverables

Milestones	Date for completion	Cost
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1. Re-define Terms of Reference for Project AF8, re-establish steering group and define links with science community	July 2018	Covered by CDEM Groups
2. Appoint a new Project AF8 coordinator	August 2018	\$100,000 wages and associated support costs for year
3. Develop existing social media brand for Project AF8 and stocktake of public education and community engagement material	September 2018	As above
4. Develop AF8 brand into a central repository for Alpine Fault related science and emergency management content	December 2018	As above
5. Coordinate planning and preparation for Tier 3 or 4 Alpine Fault exercise	Ongoing until June 2019	As above
6. Coordinating Alpine Fault scenario information and scientific input to the Recovery Planning for CDEM Groups	Ongoing until June 2019	As above
7. Oversee community activities in six CDEM Group areas; including hosting meetings, public talks and special events and involving scientific community into local events / planning	Ongoing until June 2019	\$50,000 to cover at least two community meetings in each Group, travel costs for specialists, steering groups and coordinator travel and expenses around South Island.
8. Investigate and secure funding for longer term 'Programme AF8' – year 4 onwards	June 2019	

Identified risks

Risks	Suggested management
Commitment to timeframes and completion of milestones	The Steering Group will oversee all work and receive monthly reports to monitor expenditure and progress.
The Alpine Fault ruptures before work is completed	Any preparation will be of benefit and starting the conversations with interested parties is key to networking and providing a coordinated response.
Programme Coordinator becomes unavailable / unsuitable	Work will be reviewed monthly by steering group and any deficiencies highlighted and addressed

Funding request and use					
CDEM resilience fund contribution	\$150,000				
Local authority/organisation contribution	Administration and management by EMS. Time and commitment from other CDEM Groups				
Other sources of funding or support	To be investigated for longer term support as a result of this application				
Budget <i>[Please supply spreadsheet]</i>					
Applies if application exceeds \$100,000 over the life of the project	Do you wish to attend a hearing in support of this application? <table style="display: inline-table; vertical-align: middle;"> <tr> <td style="text-align: center;">Yes</td> <td style="text-align: center;">No</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table>	Yes	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Yes	No				
<input checked="" type="checkbox"/>	<input type="checkbox"/>				
Application confirmation					
Approval of Chief Executive					
CDEM Group comment					
Project AF8 has been a great success and we need to build on this and develop a longer term programme of work.					