

# Search and Rescue in New Zealand



Department of Conservation  
*Te Papa Atawhai*





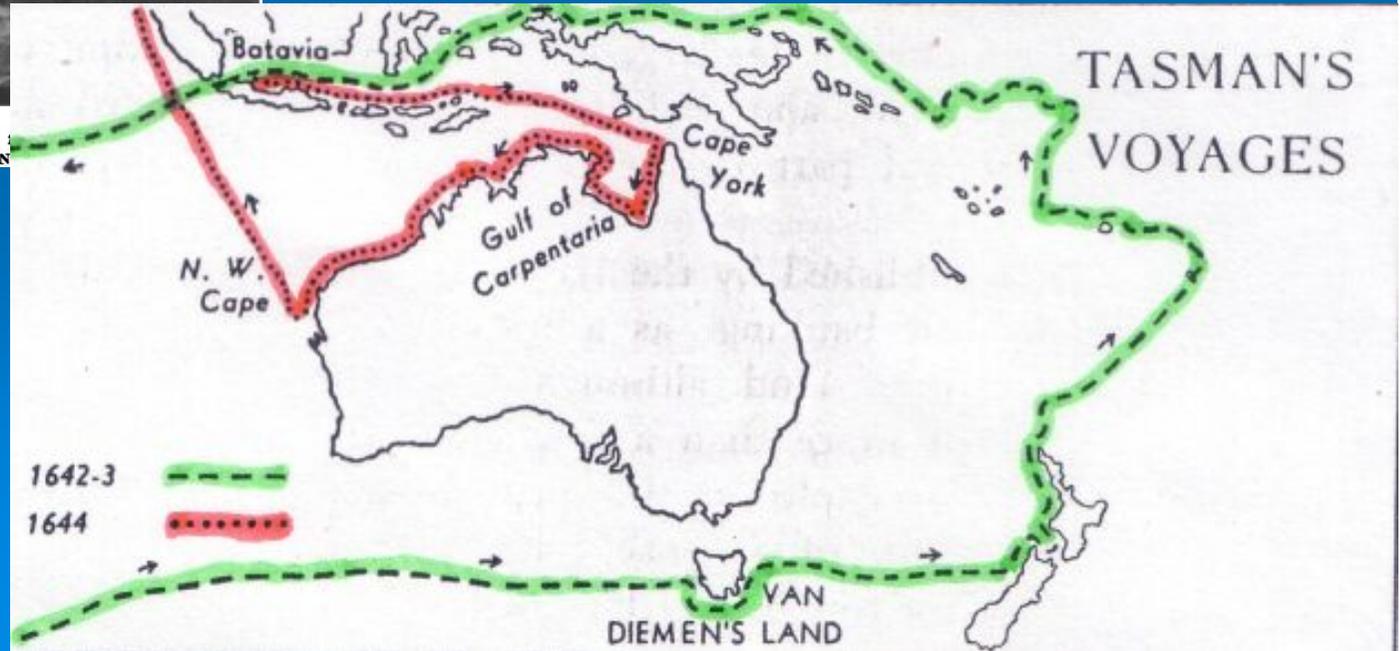
Please treat this image with respect







(From a  
Abel Tasman's "Heemskirk," off the Three Kings, N





# New Zealand today

## Population

4,290,347 (July 2011 est.)

## Urbanization

urban population: 86% of total population (2010)

rate of urbanization: 0.9% annual rate of change (2010-15 est.)

## Ethnic groups

European 56.8%, Asian 8%, Maori 7.4%, Pacific islander 4.6%, mixed 9.7%, other 13.5% (2006 Census)

## Languages

English (official) 91.2%, Maori (official) 3.9%, Samoan 2.1%, French 1.3%, Hindi 1.1%, Yue 1.1%, Northern Chinese 1%, other 12.9%, New Zealand Sign Language (official)



Map of New Zealand's population density as of the 2006 census

- Less than 1 person per square km
- 1 person per square km and above
- 10 people per square km and above
- 250 people per square km and above
- 1000 people per square km and above
- 4000 people per square km and above

# New Zealand: North Island







# New Zealand: South Island





© Tom Dempsey / Photoseek.com





# New Zealand Search and Rescue Linkages

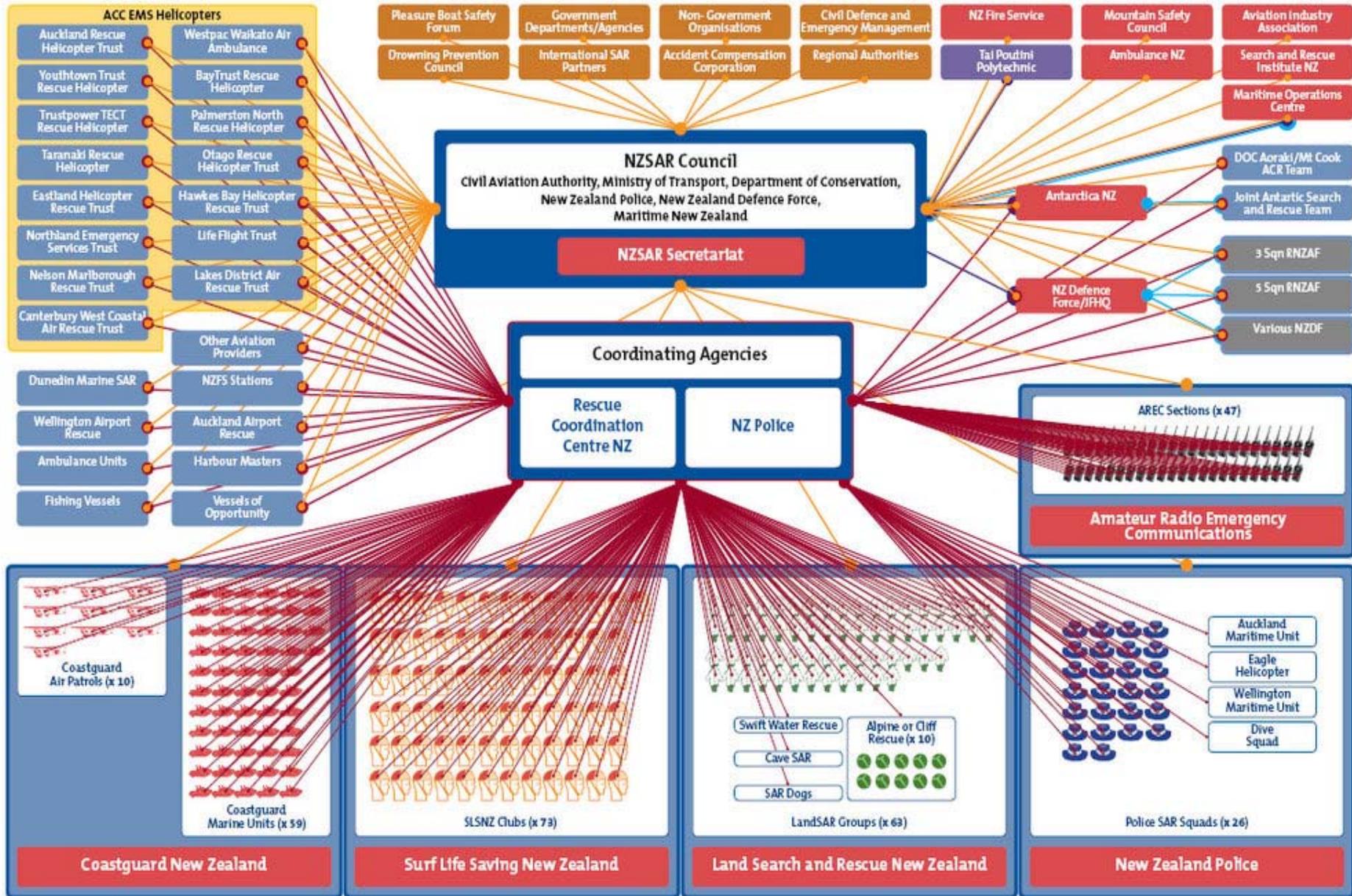
SLA Partner

NZSAR Consultative Committee

SAR Asset(s)

Prevention Information Integral

Operational Collegial



- **In New Zealand two co-ordinating authorities to initiate a SAR operation:**
- **New Zealand Police (land and close to shore),**
- **RCCNZ (Rescue Co-ordination Centre New Zealand) under maritime New Zealand are responsible for emergency locator beacons**

# Aoraki/Mt Cook Search & Rescue



A photograph of a snow-covered mountain peak, Aoraki/Mount Cook, with a red mountain hut in the foreground. The mountain is rugged and covered in snow, with a clear blue sky above. The hut is a small, rectangular building with a corrugated metal roof and a wooden deck. The foreground is a snowy slope with some rocks and a faint trail.

**Home of New Zealand's highest  
peak Aoraki/Mount Cook  
3754m.**

**70,728 hectares in area.**

**25 summits over 3000m.**

**18 mountain huts,  
with 8,000 bed nights each  
season.**

- **Aoraki/Mount Cook National Park is a magnet within Australasia for high alpine climbing**
- **attracts both international and New Zealand climbers.**
- **except for the low elevation (Aoraki Mount Cook is only 3754m) This region of the Southern Alps has all the characteristics of major mountain ranges around the world e.g. the Himalayas.**



**First recorded climbing deaths in the area – 1914.**

**Approximately 226 deaths in the park.**

**Approximately 3-5 fatalities per year.**

**64 people in the park that are still missing or unrecovered.**



On average there are 15-25 incidents that require SAR assistance each year.

Majority are alpine related.

Nature of terrain means a majority of the time it's either minor or major.

Mainly occur in the summer season – Oct/March.



## ***SAR at Aoraki/Mt Cook***

- **SAR is a Police responsibility.**
- **However Police recognized that team needed to be based in village because of the:**
  - **High number of incidents in area.**
  - **The quick response time needed.**
  - **High and specialist skill level needed.**
  - **The Police don't have the skill levels and numbers to undertake alpine rescue.**



## ***Team Composition***

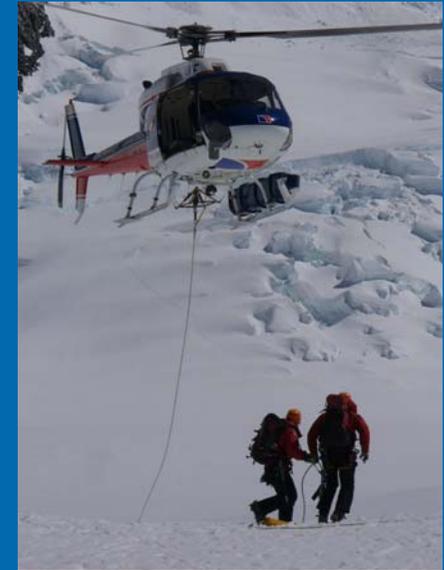
- **Four full time staff as SAR team members.**
- **Four summer mountaineers over peak period.**
- **Positions are not 100% SAR work.**
- **Approx 50% SAR (training/operations)& 50% other DOC work.**

# Nature of Today's Jobs



- Only involve 3-4 rescuers.
- Typically only last 3-5 hours
- Usually involve helicopters.
- Tend to sit out weather.
- Little or no media attention. Job is usually done by the time they arrive.
- Not often do we do a multi-day stretcher carry.

# Training is varied





## Crevasse Rescue



# Slope Lowers





**Avalanche Training**



*Currency*

# *Heli Training*





- **Rescue work in this kind of terrain is very demanding requiring specialist skills and also a quick response is essential in order to save lives.**

# Methods of alert:

- SAR staff are alerted by various means:
- cell phone call direct to an Aoraki DOC number e.g. the Visitor Centre,
- cell phone call via the 111 system to the Police or Ambulance,
- from the climbers intention card e.g. overdue or concerns as not contacted on radio schedule for several nights,
- climbers signal a passing aircraft,
- a radio call from a mountain hut by members of the injured climbing party or
- another climbing party who have observed an accident,
- activated by RCCNZ following activation of an emergency locater beacon.

# Note

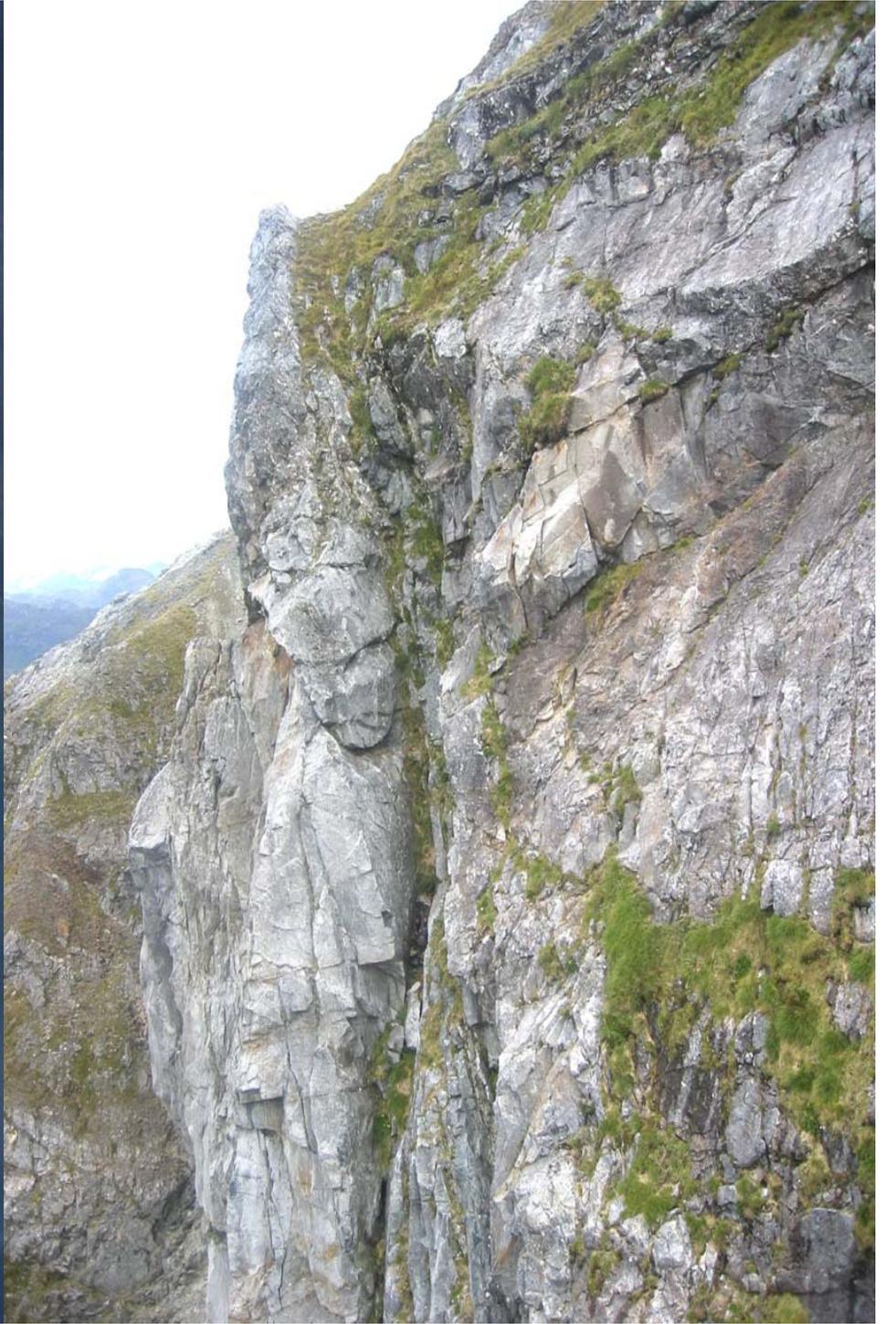
- very often little information immediately available.
- At best if an accident:
  - location,
  - number of patients
  - condition,
  - weather conditions on site,
  - terrain issues may be known for access by helicopter





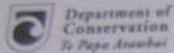






- For a rescue (known location/known patient/s) the most important information
- once the rescue team is on site-  
the patient/s condition to enable the  
activation of advanced paramedic backup  
e.g. from the Westpac Helicopter





**Notice of Intentions**  
Plan • Prepare • Equip!  
Your safety is your responsibility

Sched Sheet  
In  Out

07590

Intentions: Where are you going & staying? Sefton Riv

Party Name: (Surname for radio contact) Echart

Mobile Phone: 0220665611

Office use only	YOUR DETAILS		
	First Name	Surname	Nationality
	<u>Martene</u>	<u>Moritz</u>	<u>German</u>
	<u>Uwe</u>	<u>Echart</u>	<u>German</u>

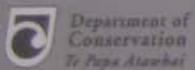
EMERGENCY CONTACT DETAILS	
Physical Address	Phone
<u>Gabriel Schabarak / Nelson</u>	<u>0226760216</u>

TRIP DATES	
Start	Due Out
<u>10/5</u>	<u>1/15</u>

Car Make & Registration no: UE8102 Toyota Previa  
 Car left at: White Horse Hill CG  
 Locator beacon: **YES / NO**  
 Avalanche transceiver: **YES / NO**  
 Bags stored locally - where?

**OFFICE USE ONLY - PRE-PAID HUT FEES**

Cash	<input type="checkbox"/>	Cheque	<input type="checkbox"/>	Date	
Eftpos	<input type="checkbox"/>	Hut Tickets	<input type="checkbox"/>	Total	
Credit Card	<input type="checkbox"/>	Hut Pass	<input type="checkbox"/>	Initial	



**RETURN SLIP - TAKE THIS WITH YOU**

07590

**IMPORTANT:** Please sign out on your return and drop this slip back at the Aoraki/Mt Cook Visitor Centre  
 Searches are expensive and you may be asked to pay

**IN AN EMERGENCY DIAL 111 AND ASK FOR POLICE**

Party Name: \_\_\_\_\_

In Hut:

Paid: \_\_\_\_\_

Camping:

Signature: \_\_\_\_\_

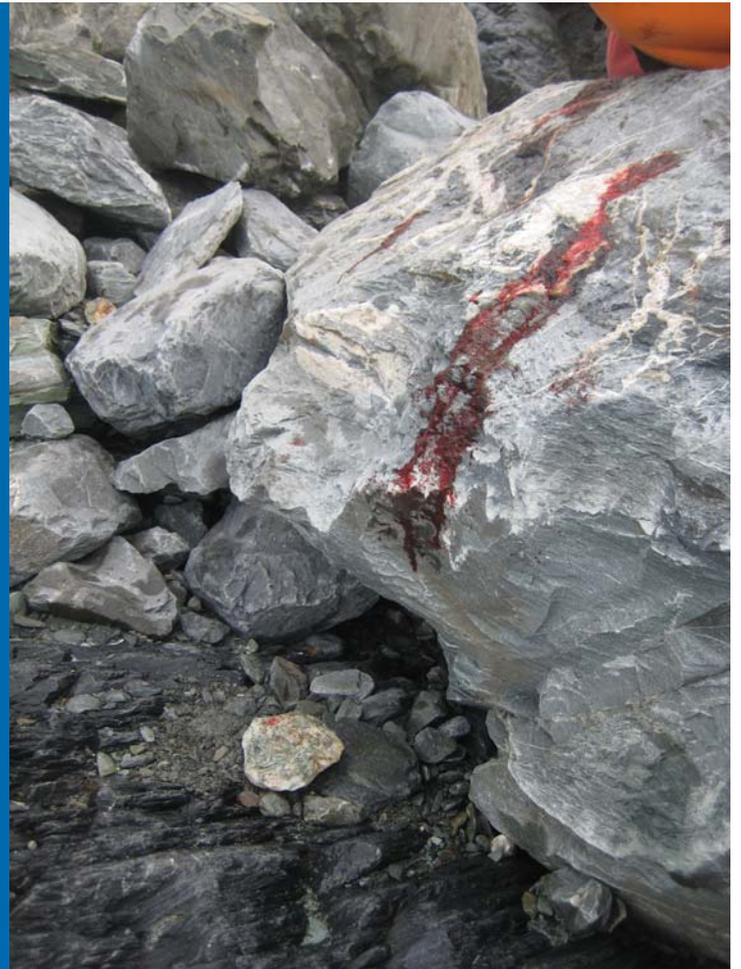
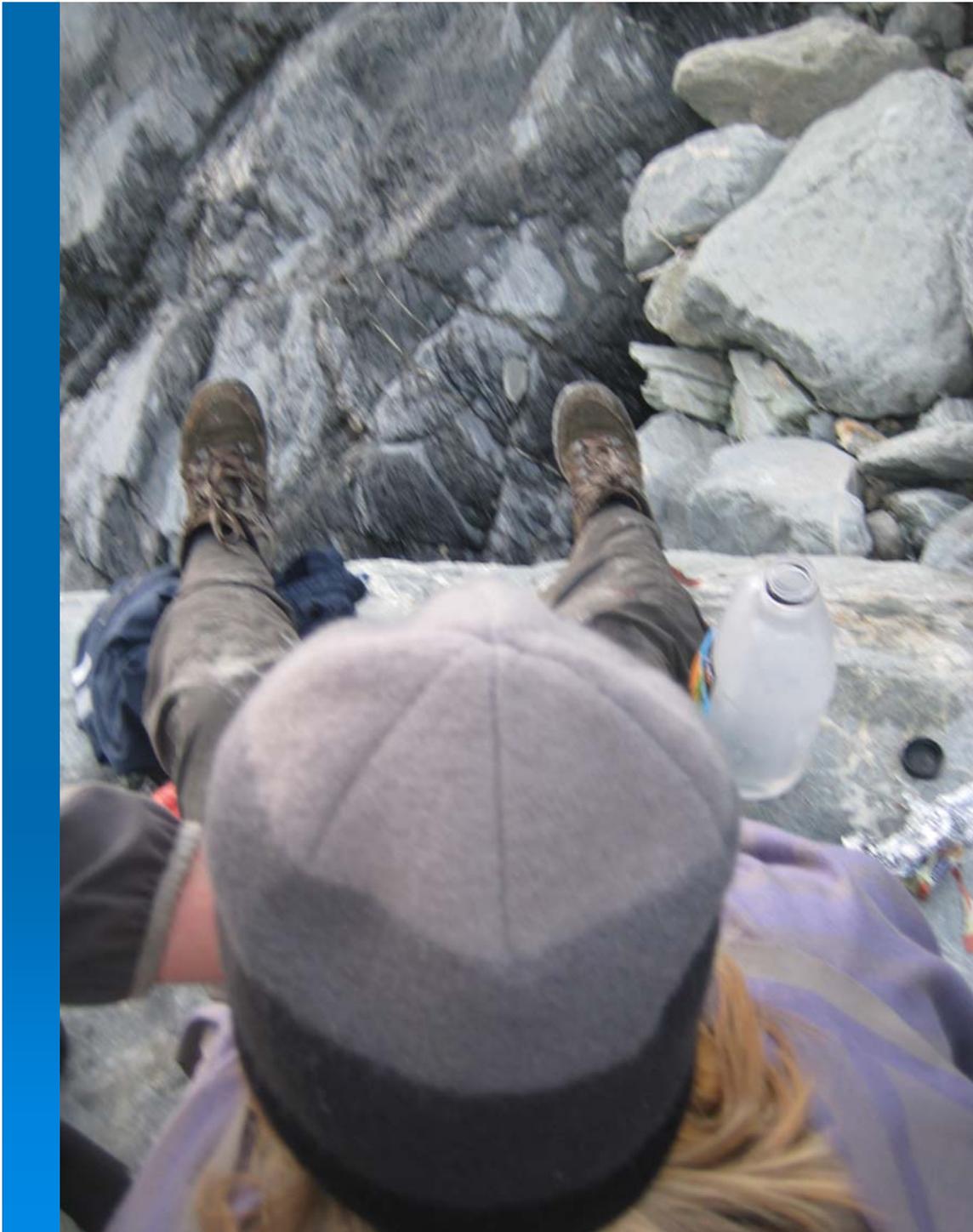
Date: \_\_\_\_\_

Department of Conservation  
 Email: [mtcookvc@doc.govt.nz](mailto:mtcookvc@doc.govt.nz)  
 Aoraki/Mt Cook Visitor Centre  
 Ph: (03) 435 1186 Fax: (03) 435 1080

Please write any comments regarding your trip on reverse side. Also details for After Hours hut fees payment.







Location Sefton Brg Route - River bed on L/Hand side, 1/2 way to Brg.

What has happened Fall/Slip with possible injury to left ankle. - Possible fracture.

Insured Party Marlene Montz

Incident Reported to VC :- [REDACTED]

Weather - Fine, clear visibility - Calm conditions.

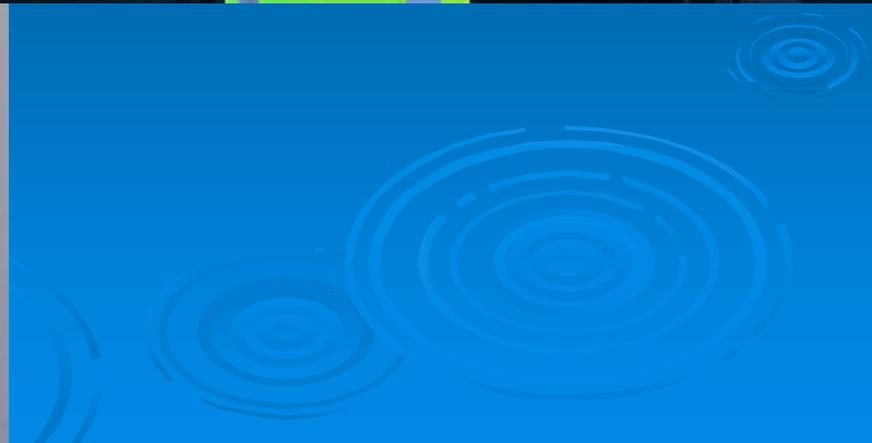


# What happens at the ES Operations Room

- Key Incident management positions are filled using the CIMS structure
- Incident Controller
- Operations Manager
- Planning/Intelligence Manager
- Logistics Manager
- Log scribe

Positions filled based on principle of “best person for the job”

	INCIDENT CONTROLLER	SAFETY
	Joe Rush	
PLANNING INTELLIGENCE	OPERATIONAL CONTROL	LOGISTICS
Ray Bellinger	Dave Dittmer	OPERATIONS
SITUATION	SAFETY TEAM	Ardy Pascoe Jok
RESOURCES	T/L Karen Jackson	
	Carole Carolie	
INTELLIGENCE INFORMATION	Marcus Reid	
	Dave WINTERBURN	
ADVANCE PLANNING	OPERATIONAL CONTROL	
MANAGEMENT SUPPORT	AMBULANCE LOGS	
FIRE LOGS	Ray Bellinger	
POLICE LOGS	Anne Sutherland	



## Rescue Plan

- ① IF party is on lower part of Section Road
  - ① A ← Secure party on stretcher To Machine → If Team Members
  - ① B — L → Hoist load.
- ② IF STROOP Rescue is Required — RO NOT STROOP CAPABLE.
- ③ L → 13:45 → Investigating site, may need to do stroop rescue  
Westpac on Route To Mt. Cook

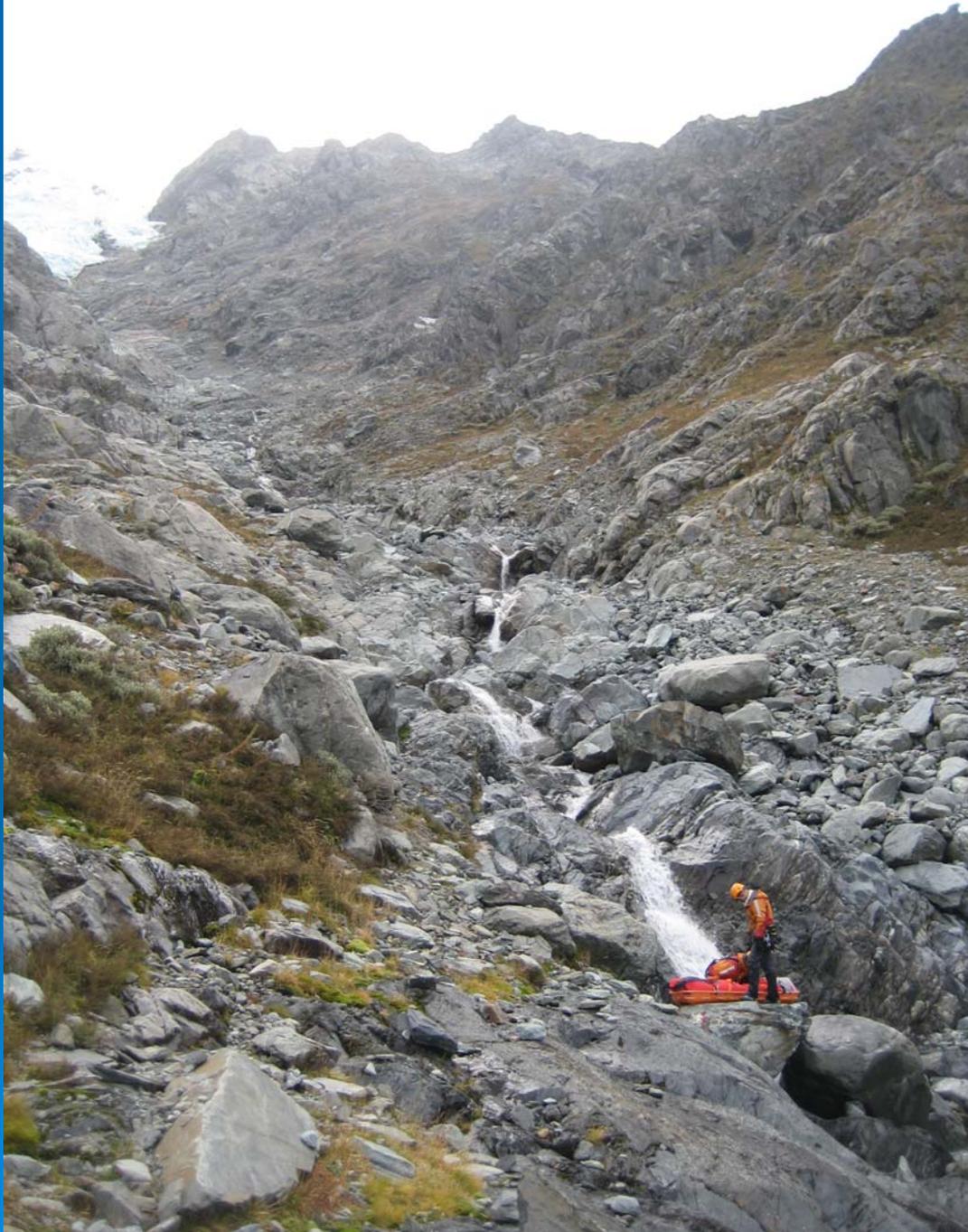




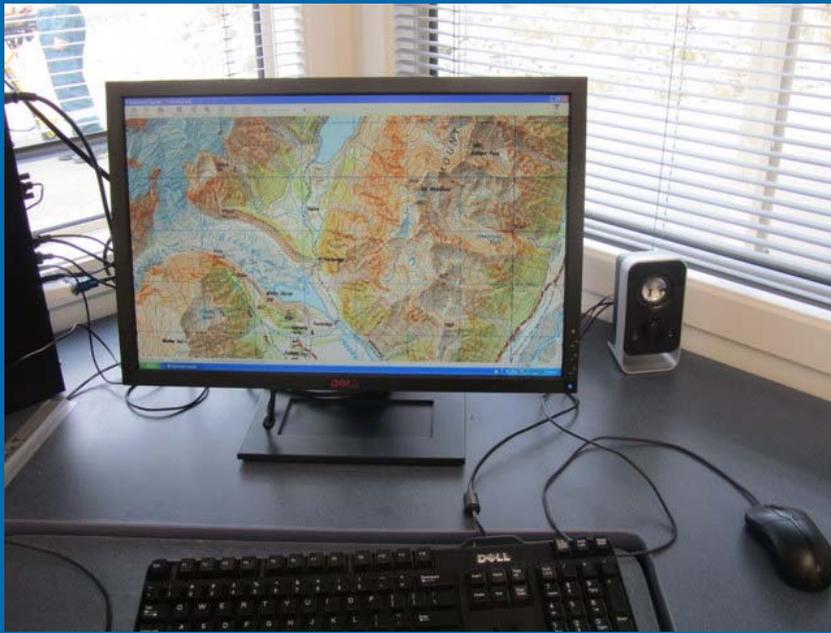
























## *Nara/Ikenouchi SAR*

- *Duty Officer contacts all the huts each night and keeps track of climbers.*
- *Duty Officer had a 'gut feeling' about the climbers even though they were not overdue.*

0900 - 1/12/08

## 2. SEARCH URGENCY CHART

- Remember the lower the number the more urgent the response
- Use two or more people to independently fill out the search urgency

SUBJECT PROFILE	Rating	Totals
<b>Number of subjects</b>		
1 Person	1	
2 People	2	
3 or more	3	
<b>Age</b>		
Very young	1	
Very old	1	
Other	2-4	
<b>Medical Condition</b>		
Known illness or injury requiring medical attention	1	
Potential vision impairment	1	
Suspected injured or ill or mental problem	2	
Healthy	3	
Known fatality	4	
<b>Physical Condition</b>		
Unfit	1	
Fit	2	
Very Fit	3	
<b>CLOTHING PROFILE</b>		
Inadequate or insufficient	1	
Adequate	2	
Very Good	3	
<b>EQUIPMENT PROFILE</b>		
Inadequate for weather, environment and activity	1	
Questionable	2	
Adequate	3	
Very Good	4	
<b>EXPERIENCE PROFILE</b>		
Not experienced, does not know area	1	
Not experienced, know area	2	
Experienced, not familiar with area	3	
Experienced, knows area	4	
<b>WEATHER PROFILE</b>		
Past and/or existing hazardous weather	1	
Predicted hazardous weather (8 hrs. or less)	2	
Predicted hazardous weather, (more than 8 hrs.)	3	
No hazardous weather predicted	4	
<b>TERRAIN HAZARDS PROFILE</b>		
Known hazards	1	
Difficult terrain	2	
Few hazards	3	
Easy terrain no known hazards	4	
<b>TOTAL</b>		<b>17</b>

If any of the categories are rated 1, regardless of the total, the search may require immediate response.

9-17  
URGENT RESPONSE

18-27  
MEASURED RESPONSE

28-33  
EVALUATE & INVESTIGATE





Gear List - from Kiyoshi's pack.

Rope 9.5 50m x 1  
Slings 1 11mm x 240cm  
6 7mm x ~~160~~ cm  
1 7mm x 120cm

Sling autobrake x 2  
Caracay Karabiner x 16

locking Karabiner x 4 each  
Ropeman ascender x 1

Friends x 5 sizes 1 to 3  
Ice Screw 4 x 16mm

Snow Picket 2 x 20cm  
2 x 58cm  
2 x 50cm

Gear Rack x 1

Backpac 1 x 60l

Helmet x 1

Ice Pick x 1

Bail?

Crampons x 1

Boots x 1

Carders x 1

Harness x 1

Salopette x 1

Rain Jacket x 1

Neck warmer x 1

Inner gloves x 1

Over gloves x 1

over jacket x 1

over pants x 1

inner jackets x 1

socks x 2

inner pants x 1

underwear

down jacket x 1

Fleece x 1

Single person mat x 1

Tent

Tent fly

sleeping bag  
cover

## Options:

- ① Hover & drop off two rescuers.  
Rest to staging area.  
Then stop up with one - back w patient  
Then stop up with one - back w 2nd patient  
Stop up empty - back with 2 rescuers

~~st~~ -

- ② Straight stop - 2 people up.  
Prep patients  
As above.

- ③ BK - Winch 2 people down.  
Prep patients  
As above.  
- Stage to Gardner Hut.

BK vs Strop -

- ① Southcom - ask BK. - ~~500~~ Carl.  
Cellphone if duty pilot to talk to Dave W.
- ② Wanaka SAR - Clinton  
Bryan/Dave to brief them.
- ③ Japanese Interpreters - Mae talk to Denis.  
Brief them on site - Shuler -

②

Teams: 2 of 4  
 2 on stop  
 2 at staging area on medical | Set up good working platf  
 2 Helo's

If go on drop bag flight, try and determine a safe LZ

Needs right resources in right places.  
 Needs management done well.

Discussion on medical care.  
 Adv. paramed. can't do any more for frostbite/hypothermia than most people.

Plan:

Need to be here @ 0500 3/12/08.

- 1 Team x 4 → drop bag + stop
- 1 Team x 3 → set up LZ
- + 2 Machines -

Team 4 RN + drop/stop

Land

If drop bags 2+ drop

If stop team 3 → LZ - prep + stop in

stop occurs -

3/11

Team + drop bags

Dave, Timmy, ~~Karen~~ Marcus - 2 @ LZ - Karen start prep Marcus

Team + stop

Hobbie, Richie, ~~Karen~~ Jane @ LZ - start prep

LZ - Karen, Dave, Richie, Jane

Stop - Timmy, Hobbie(r) + Marcus if need

③

Plan

## NZLSAR TEAM TASKING

DATE TIME GROUP		INCIDENT NAME		TEAM NAME		TEAM CALL SIGN	
				DAVE		DAVE	
RESOURCE	GROUND TEAM	D	TCA	HELO	OTHER		
		O					
		GS	✓				
TYPE							
TEAM LEADER		DAVE WINTERDUNN					
Team Members		RICHARD CATNES KAREN JACKSON					
Map/s Used		H36 NZMS 260		Date			
<b>Assignment:</b> SEARCH PLS CHECK AREA A - B2 on Route - B1 SEARCH DETAIL							
<b>Decision Points for Team:</b>							
<b>Hazards:</b>							



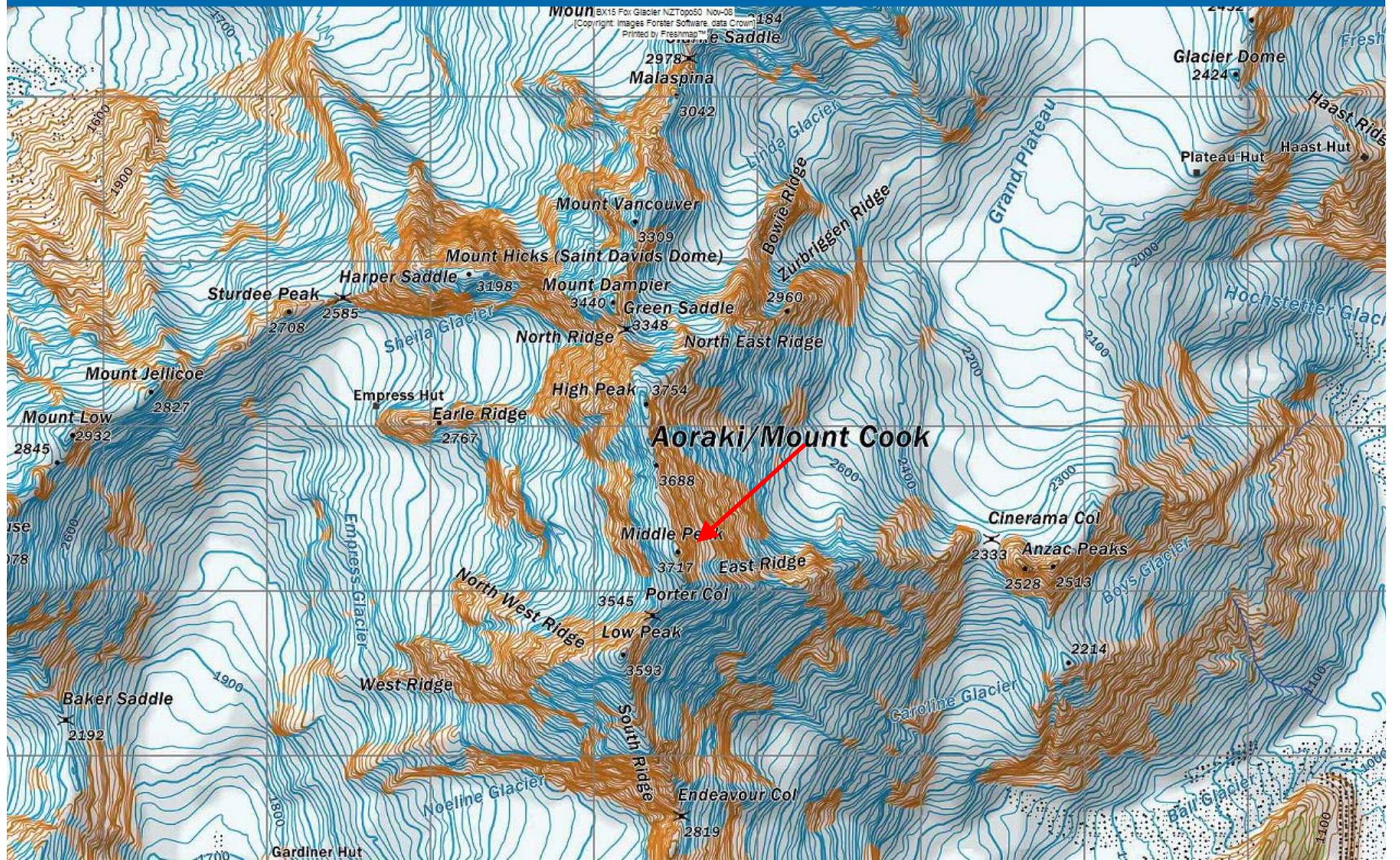
**Project Schedule**

Task	Start	End	Dependencies	Notes
Task 1	1/15	1/20		
Task 2	1/20	1/25	Task 1	
Task 3	1/25	2/1	Task 2	
Task 4	2/1	2/15	Task 3	
Task 5	2/15	2/20	Task 4	
Task 6	2/20	2/25	Task 5	
Task 7	2/25	3/1	Task 6	
Task 8	3/1	3/15	Task 7	
Task 9	3/15	3/20	Task 8	
Task 10	3/20	3/25	Task 9	

Additional notes on the whiteboard include a flowchart on the right side and several small images pinned to the board.

Desk area containing:

- A blue water bottle with a white label.
- A stack of papers and documents.
- A green folder.
- A black stapler.
- A white printer.
- A glass jar.



- *This photo taken on day 3 of 5.*
- *Drop bag contained radio, food, clothing, cookers etc. but they did not find it...*
- *The following day the village received over 200mm rain = 2 m snow on site and 100km winds.*
- *During the storm the climbers lost their tent and belongings.*





- Temperature at time of rescue was  $-21^{\circ}\text{C}$
- Nara used a ballpoint pen and helmet to dig hole.
- Hideaki Nara escaped with just minor frostbite.
- Kiyoshi Ikenouchi died just hours before Nara was rescued
- SAR team returned about 10 mins later to rescue Kiyoshi.



























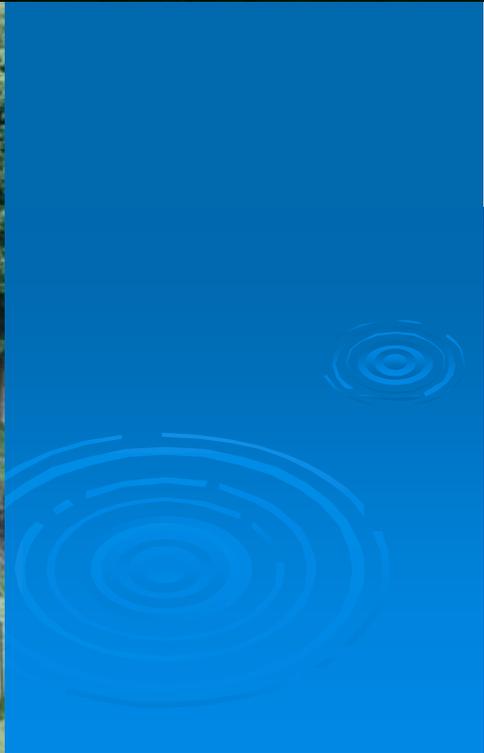
















# Today...

***SAR is funded by DOC, and/by working agreement with the NZ Police - to provide an Alpine SAR service to the Aoraki/Mount Cook National Park***



- ***Police pay for SAR 'Operational Costs'- helicopters, food, lost gear.***
- ***DOC pay for wages (training and Ops) and equipment.***
- ***Cost DOC approx \$150,000 a year***