

APPENDICES

APPENDIX A

Inter-Organisational Relationships Questionnaire

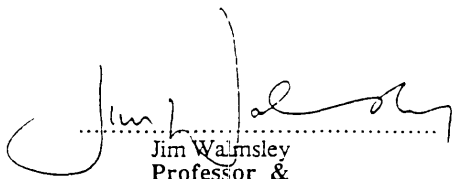
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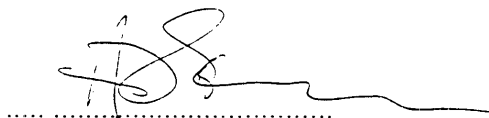
13th August 1993

TO WHOM IT MAY CONCERN

This is to introduce **Robin PAGRAM**, who is a Ph.D. student in this department working in the field of disaster management. Any assistance or advice you are able to give him would be very much appreciated. Information will be treated with the strictest confidentiality.

Please get in touch with me if you have any questions in relation to Mr. Pagram's work.


.....
Jim Walmsley
Professor &
Head of Department


.....
Dr. A. D. Sorensen
Senior Lecturer



Dear Respondent,

My name is Robin Pagram and I am a postgraduate student doing a Doctor of Philosophy degree in the Department of Geography and Planning, The University of New England, Armidale, New South Wales.

I am conducting research into the most effective way(s) of organising, managing and integrating autonomous and independent state-level organisations that have an involvement in 'disasters'. This is with a view to ascertaining the criteria that would define the most efficient and effective Australian disaster management system.

My view is that there are quantitative and qualitative differences separating accidents, emergencies and disasters. I am interested in disasters which I define as follows:

"The difference between a disaster and a non-disaster situation...is that under conditions of disaster, the structure and processes of social organisation in some way become disrupted to the extent that human existence within a particular location is severely jeopardised. The disruption of the social organisation is not found within accident or emergency situations. Rather, in these cases, routines have been affected. This makes the disaster event, as Wallace (1956) intimated, a comparatively rare event within the generality of human experience. Disasters are a particularly intense form of collective stress." (p266) [Excerpt taken from Neil Britton's "Developing an Understanding of Disaster" Australian and New Zealand Journal of Sociology. 1986. 22(2) July: 254-271.

To help me in my research, I would like to ask for your assistance in completing and returning a questionnaire which is an **Assessment of Inter-Organisational Relationships in Australia's Disaster Management System**. It would be appreciated if you did not consult with others in filling out the questionnaire. There are no right or wrong answers, and I simply want your views and those of a cross-section of other people involved in disaster management.

It should be stressed that views outlined by respondents will be kept strictly confidential and only read by myself and used for the purposes of my research into disaster management.

The questionnaire may appear long, but it should not take much time to complete because the length stems from leaving room for you to write your comments.

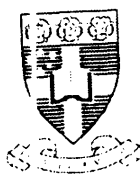
Should you have any queries regarding matters related to this questionnaire please do not hesitate to contact me (ie. Robin Pagram) on phone number **067-732803** or fax **067-711787**.

PLEASE RETURN QUESTIONNAIRE THREE WEEKS AFTER RECEIPT IN THE POSTAGE PAID ENVELOPE PROVIDED.

I thank you for participating in this questionnaire. Your assistance is much appreciated.

Yours sincerely,

Robin Pagram



**ASSESSMENT OF
INTER-ORGANISATIONAL RELATIONSHIPS
QUESTIONNAIRE**

PLEASE ANSWER THE FOLLOWING QUESTIONS BY TICKING THE APPROPRIATE BOX (ie.[]), CIRCLING THE APPROPRIATE RESPONSE AND/OR COMMENTING AS REQUIRED.

IF YOU FEEL THAT A QUESTION IS "NOT APPLICABLE" TO YOU OR YOUR ORGANISATION PLEASE INDICATE "N/A".

SHOULD YOU NEED MORE SPACE IN ANSWERING THE QUESTIONS PLEASE ATTACH ADDITIONAL PAGES AS REQUIRED.

QUESTIONS

Respondent Details

The following questions are asked so as to ascertain your role(s), responsibilities, qualifications, authority and experience in DISASTER management. It should be stressed that your name is not required and all answers in this section will be aggregated for analysis.

[Q1a]

In which state do you work?

NSW QLD

[Q1b]

For which organisation do you work? (Note - names provided will vary between states and territories. If in doubt, select the last category ie. Other (please specify) _____)

State Emergency Service

Fire Service (please specify, ie. urban, rural, forestry) _____

Ambulance Service

Police Service

Health Service

Public Utility (please specify, ie. water, electricity) _____

Other (please specify) _____

[Q1c]

Within your organisation, please identify the Department, Section, and Unit in which you work (tick more than one box'as appropriate):

Department (please specify) _____

Section (please specify) _____

Unit (please specify) _____

[Q1d]

What is your Position, Appointment, or Title? _____

[Q1e]

Is this a 'permanent', 'contract', or 'volunteer' position? _____

[Q1f]

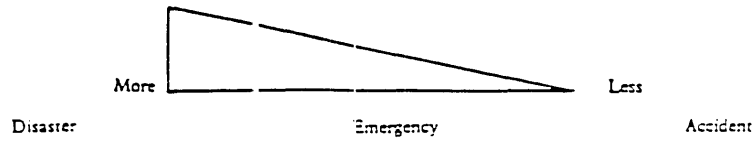
How many years experience do you have in the field of **counter-disaster** management (including time spent in your present organisation and elsewhere)?

- Less than 12 months
- 1-3 years
- 3-6 years
- 6-10 years
- 10-15 years
- More than 15 years (please specify) _____

Please outline the nature of experience obtained **outside** of your present organisation and where that experience was obtained:

CONTINUUM OF COLLECTIVE STRESS

- Parameters:* (1) Number of people involved
 (2) Degree of involvement of population within the 'affected' social system
 (3) Amount of disruption by the collective-stress agent on the social system



Disaster	Emergency	Accident
(1) Widespread and near-complete disruption of ALL social processes, social structure, and primary/secondary interactions	(1) Focalised disruption interfering with ongoing activities of specific people involve, plus	(1) Disruption of specific interest group of victims and significant others
(2) Widespread destruction of functional infrastructure (buildings, communications networks, social support networks)	(2) Disruption of a number of peripheral persons, either by relationship (i.e. significant others), by chance (i.e. proximal others), or by position (role incumbent)	(2) No disruption to larger societal population
(3) <i>Affects</i> System of biological survival System of order System of meaning System of motivation System of crisis management capabilities	(3) Noticeable time-lapse between event and resolution of event (4) No disruption/destruction to overall social structure or social system processes although localised disruption probable	(3) No disruption of social infrastructure

[Q1g]

Bearing in mind the continuum of collective stress highlighted above, and noting the quantitative and qualitative differences separating accidents, emergencies, and disasters how many **disaster** events (natural and technological) have you actively participated in as a response agent?

None 1 2 3 4 More than 4 (please specify) _____

Please identify these events:

[Q1h]

Please detail any qualifications (certificate, diploma, degree etc.) you hold, and the college, institute, university or other body awarding the qualification (**also include those qualifications completed "in-house" within your organisation**):

Qualification	Awarding Authority	Completion Date

If there was a subject(s) in which you specialised in your qualification(s), please state what it was/were

[Q1i]

Please identify what you regard as your **different** roles and/or responsibilities in accidents, emergencies, and disasters (re-examine the continuum of collective stress on Page 3 for clarification). Your responsibilities **Before, During, and After** such events should be differentiated.

RESPONSIBILITIES IN ACCIDENTS

Before	During	After

RESPONSIBILITIES IN EMERGENCIES

Before	During	After

RESPONSIBILITIES IN DISASTERS

Before	During	After

Counter-Disaster Training

The following questions are asked to find out the type and effectiveness of **DISASTER** (as opposed to accident or emergency) training undertaken by disaster relevant organisations.

[Q2a]

To your knowledge does your organisation distinguish between accidents, emergencies and disasters in its training programme(s)?

Yes No Don't Know

[Q2b]

How often (in the last 12 months) have you engaged in **counter-disaster** training (ie. training includes table-top, seminar, field exercises etc.) with personnel from organisations listed below?

State Emergency Service

Never	Weekly	1-3 Times a Year	4-6 Times a Year	More than 6 Times
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Fire Service (Urban)

Never	Weekly	1-3 Times a Year	4-6 Times a Year	More than 6 Times
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Fire Service (Rural)

Never	Weekly	1-3 Times a Year	4-6 Times a Year	More than 6 Times
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Fire Service (Forestry)

Never	Weekly	1-3 Times a Year	4-6 Times a Year	More than 6 Times
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Ambulance Service

Never	Weekly	1-3 Times a Year	4-6 Times a Year	More than 6 Times
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Police Service

Never	Weekly	1-3 Times a Year	4-6 Times a Year	More than 6 Times
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Health Service

Never	Weekly	1-3 Times a Year	4-6 Times a Year	More than 6 Times
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[Q2b] Continued

Public Utility (Water)

Never	Weekly	1-3 Times a Year	4-6 Times a Year	More than 6 Times
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Public Utility (Electricity)

Never	Weekly	1-3 Times a Year	4-6 Times a Year	More than 6 Times
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[Q2c]

Please identify and differentiate the type of SKILLS TRAINING (ie. training includes table-top, seminar, field exercises etc.) undertaken to combat the effects of accidents, emergencies, and disasters. Also, indicate for these event categories the relevant organisations you train with.

ACCIDENTS

Type of Training	Associated Organisation(s)

EMERGENCIES

Type of Training	Associated Organisation(s)

DISASTERS

Type of Training	Associated Organisation(s)

[Q2d]

Counter-disaster skills training involves working with other disaster-relevant organisations. The following is a list of known inhibitors of effective coordination. Please **rank six (ie. 1-6)** observed inhibitors that have in your opinion lead to the greatest operational difficulties among disaster-relevant organisations. Also, rate the extent of the six problems.

Rate problem using the code:

Very High = VH; High = H; Neither High or Low = NHL; Low = L; and Very Low = VL)

- Vested Interests _____
- Perceived threat/competition _____
- Perceived loss of organisational and program identity/strategic position _____
- Perceived loss of organisational-leader-staff prestige/authority domains _____
- Client (ie. community) alienation _____
- Different leadership approaches/authority _____
- Disparities in staff training _____
- Inter and intra professional differences _____
- Different priorities/ideologies/outlooks/goals _____
- Lack of common language _____
- Internal norms against environmental outreach _____
- Negative evaluations of other organisations _____
- Imperfect knowledge of environment _____
- Poor historical relations/image formation _____
- Perceived sanctions by network members _____
- Costs outweigh benefits _____
- Bureaucratisation _____
- Centralisation _____
- Inadequate internal communication/tolerance _____
- Little or no boundary permeability/roles _____
- Infrequent/inadequate external communication _____
- Structural differences _____
- Fragmentation of the environment - federal/state/local levels of government _____
- Turnover of policy personnel _____
- Other (please specify) _____

No inhibitors to effective coordination observed among disaster-relevant organisations ----- **GO TO [Q3a]**

[Q2e]

The following is a list of known facilitators of effective coordination. Please **rank six (ie. 1-6)** facilitators that could in your opinion solve inter-organisational coordination problems among disaster-relevant organisations observed during counter-disaster training sessions.

- Perceived need
- Rewards outweigh costs
- Positive attitudes
- Consensus between administrators and staff
- Cosmopolitan ethos
- Group-centred approach to problems
- Accessibility to other organisations
- Similar resources/goals/needs
- Common definitions/ideologies/interests/approaches
- Agreement in domains/value of coordination
- Perceived partial interdependence
- Organisational norms of innovation and coordination
- Professionalism
- Occupational diversity
- Leadership qualities
- Informal contracts/exchange of information and resources
- Geographic proximity
- Boundary permeability/roles
- Complementary organisational/personnel roles
- Similarity of structures/supply capabilities/needs/services
- Other (please specify) _____

Commonwealth Counter Disaster Management Concepts

The following questions investigate the extent to which organisations with an involvement in DISASTERS are recognising and planning counter-disaster management operations around four approaches commonly used in disaster management.

The Commonwealth defines, the four approaches as:

The all hazards approach (ie. the development of a single set of management arrangements capable of encompassing all hazards - natural and technological);

The comprehensive approach (ie. the consideration of hazard prevention, preparedness, response and recovery programs);

The all agencies (or integrated) approach (ie. the development of arrangements facilitating cooperation between Commonwealth, State and local levels of government, statutory authorities and voluntary organisations); and

The prepared community (ie. the view that there is much that individuals, voluntary organisations and local government can do to help themselves and others within their community).

[Q3a]

Has your organisation to your knowledge established performance measures by which to evaluate the success of an **all hazards approach** to disaster management?

Yes No ----- **GO TO [Q3b]** Don't Know

If YES, can you detail what criteria has been used to measure performance and/or effectiveness of an **all hazards approach**?

[Q3b]

Has your organisation to your knowledge established performance measures by which to evaluate the success of a **comprehensive approach** to disaster management?

Yes No ----- **GO TO [Q3c]** Don't know

If YES, can you detail what criteria has been used to measure performance and/or effectiveness of a **comprehensive approach**?

[Q3c]

Has your organisation to your knowledge established performance measures by which to evaluate the success of an **all agencies (or integrated) approach** to disaster management?

Yes No ----- **GO TO [Q3d]** Don't know

If YES, can you detail what criteria has been used to measure performance and/or effectiveness of an **all agencies (or integrated) approach**?

[Q3d]

Has your organisation to your knowledge established performance measures by which to evaluate the success of the **prepared community approach** to disaster management?

Yes No ----- **GO TO [Q3e]** Don't know

If YES, can you detail what criteria has been used to measure performance and/or effectiveness of the **prepared community approach**?

[Q3e]

Do you foresee any aspects of your state or territory counter-disaster arrangements (ie. legislation, plans, procedures etc.) that could adversely affect the way your organisation fulfils its counter-disaster responsibilities?

Yes It Depends No Don't Know

If YES, IT DEPENDS or DON'T KNOW, please indicate the reasons for your answer:

Working Relationships

The following questions seek to understand the nature of relationships between organisations with an involvement in DISASTERS. The questions have been asked to find out potential strengths and weaknesses in inter-organisational relationships that could surface during disaster events.

[Q4a]

Do you have ready access to the **current names and contact details** of personnel in other organisations with an involvement in disasters?

Yes No Don't Know

If NO or DON'T KNOW please explain:

[Q4b]

Do you have ready access to the **resource registers** (includes type and numbers of trained personnel and equipment) of other organisations with an involvement in disasters?

Yes No Don't Know

If NO or DON'T KNOW please explain:

[Q4c]

Please identify the principal organisations with whom you have dealings in undertaking your **counter-disaster** management responsibilities. **I have provided space for up to FOUR organisations.** In each case, please specify the level of cooperation you usually receive from them by ticking the appropriate response.

ORGANISATION 1 (please specify) _____

Level of cooperation received:

Very High	High	Neither High or Low	Low	Very Low
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please Explain:

ORGANISATION 2 (please specify) _____

Level of cooperation received:

Very High	High	Neither High or Low	Low	Very Low
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please Explain:

[Q4c] Continued

ORGANISATION 3 (please specify) _____

Level of cooperation received:

Very High	High	Neither High or Low	Low	Very Low
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please Explain:

ORGANISATION 4 (please specify) _____

Level of cooperation received:

Very High	High	Neither High or Low	Low	Very Low
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please Explain:

[Q4d]

To what extent have you formed personal or informal linkages with personnel in other organisations with an involvement in disasters?

- None ----- **GO TO [Q5a]**
- Linkages with personnel in 1 to 2 organisations
- Linkages with personnel in 3 to 4 organisations
- Linkages with personnel in 5 to 6 organisations
- Linkages with personnel in more than 6 organisations

[Q4e]

How would you rate the usefulness of personal or informal linkages that you have formed with personnel in other organisations with an involvement in disasters in allowing you to fulfil your counter-disaster responsibilities?

Very Useful	Useful	Neither Useful or Useless	Useless	Totally Useless
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please explain:

[Q4f]

Would you agree that establishing personal or informal linkages (ie. friendship) with any personnel in other organisations with an involvement in disasters is a useful way of overcoming inter-organisational conflict and non-cooperation?

Yes It Depends No Don't Know

If NO, IT DEPENDS or DON'T KNOW, please explain why?

Organisational Capacity

The following questions have been asked to find out your organisation's capacity or ability to deal with DISASTERS (as opposed to accidents and emergencies). In this questionnaire, organisational capacity specifically refers to numbers of trained personnel and equipment.

[Q5a]

Do you believe that your organisation is likely to have any problems in scaling-up operationally, or making the transition from dealing with routine relatively small-scale emergencies to dealing with non-routine large scale disasters?

Yes It Depends No Don't Know

If YES, IT DEPENDS or DON'T KNOW, please specify the nature of the problems you face:

[Q5b]

Do you believe that your organisation can provide sufficient trained and appropriate skilled personnel to replace you during a prolonged disaster (ie. an extended declaration) operation so that inter-organisational relationships or the flow of vital information are not disrupted?

Yes It Depends No Don't Know

If NO, IT DEPENDS or DONT' KNOW, please indicate how your organisation would cope:

[Q5c]

A hypothetical bushfire disaster in a local government area sees:

- 50% of buildings severely damaged or destroyed;
- 40% of vehicles severely damaged or destroyed;
- 60 people killed and 140 people injured requiring hospitalisation;
- General Hospital destroyed;
- 1500 people homeless;
- communications overloaded, disrupted or lost altogether;
- all power supplies cut;
- in some cases, water supply is disrupted;
- provision of warning to key authorities and communities is seriously downgraded; and
- access into and from the major affected areas is made impossible.

Based on the above scenario, do you believe that your organisation can provide sufficient equipment and/or services so that counter-disaster operations are not disrupted and that effective inter-organisational coordination is maintained?

Yes It Depends No Don't Know

Please indicate the reasons for your answer

What equipment and/or services do you think your organisation might need in the above bushfire disaster scenario and how easily could these be attained?

Equipment and/or Services

Ease of Attainment

[Q5d]

Please detail any actions that you think are necessary in order to improve the organisational capacity of your organisation (ie. in terms of personnel, equipment, provision of service/ etc.)?

Financial Arrangements

The following questions aim to gauge your organisation's success at (a) competing for funds, and (b) utilising allocated funds effectively for DISASTER management.

[Q6a]

Can you detail your organisation's source(s) of funding for counter-disaster management?

Yes No Don't Know

If Yes, please outline your organisation's source(s) of funding:

[Q6b]

Do you think that your organisation is effectively utilising allocated funds in the area of **disaster preparedness** (ie. ensuring that there are arrangements in place for the mobilisation and deployment of all resources and services)?

Yes It Depends No Don't Know

Please indicate the reasons for your answer

[Q6c]

Do you think that your organisation has effectively utilised allocated funds in the area of **disaster response** (ie. ensuring that actions taken during and immediately after disaster impact minimise effects)?

Yes It Depends No Don't Know

Please indicate the reasons for your answer

Inter-Organisational Liaison Personnel

Inter-organisational liaison personnel (or Emergency Service Liaison Officers) are individuals whose duties include the transfer of information and resources among organisations. This is a critical activity before, during, and after DISASTERS. The following questions seek to explore the presence of, and effectiveness of, liaison personnel in your organisation.

[Q7a]

In your organisation do you have liaison personnel whose functions include the transfer of information and resources among organisations?

Yes No ----- **GO TO [Q8a]**

[Q7b]

How would you rate the effectiveness of the **interchange of information** by liaison personnel between your organisation and other organisations for accidents, emergencies and disasters?

ACCIDENTS

Very Effective	Effective	Neither Effective or Ineffective	Ineffective	Very Ineffective
[]	[]	[]	[]	[]

Please comment on the reasons for your evaluation:
(NB. If you can, please comment on the type of information, relevance of information, amount of information, dissemination of information, and how quickly information is disseminated)

EMERGENCIES

Very Effective	Effective	Neither Effective or Ineffective	Ineffective	Very Ineffective
[]	[]	[]	[]	[]

Please comment on the reasons for your evaluation:
(NB. If you can, please comment on the type of information, relevance of information, amount of information, dissemination of information, and how quickly information is disseminated)

[Q7b] Continued

DISASTERS

Very Effective []	Effective []	Neither Effective or Ineffective []	Ineffective []	Very Ineffective []
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Please comment on the reasons for your evaluation:

(NB. If you can, please comment on the type of information, relevance of information, amount of information, dissemination of information, and how quickly information is disseminated)

[Q7c]

How would you rate the effectiveness of the **interchange of resources** by liaison personnel between your organisation and other organisations for accidents, emergencies and disasters?

ACCIDENTS

Very Effective []	Effective []	Neither Effective or Ineffective []	Ineffective []	Very Ineffective []
-------------------------	-----------------	---	-------------------	---------------------------

Please comment on the reasons for your evaluation:

(NB. If you can, please comment on the amount of, and type of personnel and equipment, and how quickly it can be accessed)

[Q7c] Continued

EMERGENCIES

Very Effective []	Effective []	Neither Effective or Ineffective []	Ineffective []	Very Ineffective []
-----------------------	------------------	---	--------------------	-------------------------

Please comment on the reasons for your evaluation:
(NB. If you can, please comment on the amount of, and type of personnel and equipment, and how quickly it can be accessed)

DISASTERS

Very Effective []	Effective []	Neither Effective or Ineffective []	Ineffective []	Very Ineffective []
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Please comment on the reasons for your evaluation:
(NB. If you can, please comment on the amount of, and type of personnel and equipment, and how quickly it can be accessed)

Organisation Restructuring

Organisation restructuring is sometimes required in order to improve the operational capacity of organisations and improve relationships between and within. The following questions investigate restructuring that may have occurred in your organisation in recent times.

[Q8a]

Has your organisation undergone any recent (ie. in the past 5 years) restructuring for the purposes of improving counter-disaster operational capacity?

Yes No ----- **GO TO [Q9a]** Don't know

Please describe the nature of the restructuring:

[Q8b]

Rank five (ie. 1-5) reasons from the following list as explanation of why you think restructuring took place in your organisation?

- To improve program management
 - To improve personnel performance
 - To address lack of common administrative boundaries
 - To address poor operational planning
 - To address the lack of common terminologies and management systems
 - To address inadequacies in community public relation programmes
 - To achieve better integration of volunteer workers
 - Take advantage of technological improvements in equipment and management systems
 - Achieve better coordination
 - Reduce duplication of services and facilities
 - To address changes in the environment with regard to hazard risk (ie. population increases, tourism, increasing number of high-rise buildings, increasing growth of flammable and toxic substance storage sites etc.)
 - Other (please specify) _____
-
-

[Q8c]

Did the re-structuring in your organisation aim at an "**all hazards approach to disaster management**"?

Yes No ----- **GO TO [Q8d]**

If YES, how would you rate the restructuring in respect of the above aim:

Very Effective	Effective	Neither Effective or Ineffective	Ineffective	Very Ineffective
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[Q8d]

Did the re-structuring in your organisation aim at an "**comprehensive approach to disaster management**"?

Yes No ----- **GO TO [Q8e]**

If YES, how would you rate the restructuring in respect of the above aim:

Very Effective	Effective	Neither Effective or Ineffective	Ineffective	Very Ineffective
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[Q8e]

Did the re-structuring in your organisation aim at an "**all agencies (or integrated) approach to disaster management**"?

Yes No ----- **GO TO [Q8f]**

If YES, how would you rate the restructuring in respect of the above aim:

Very Effective	Effective	Neither Effective or Ineffective	Ineffective	Very Ineffective
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[Q8f]

Did the re-structuring in your organisation aim at an "**prepared community approach to disaster management**"?

Yes No ----- **GO TO [Q8g]**

If YES, how would you rate the restructuring in respect of the above aim:

Very Effective	Effective	Neither Effective or Ineffective	Ineffective	Very Ineffective
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[Q8g]

Please identify what you see as the **strengths** of your organisation's restructuring and provide explanation in each case. **I have provided space for you to identify the THREE most important strengths.** (If you want to identify more than three, please attach an additional page)

STRENGTH 1 (please specify) _____

Please indicate the reasons for your answer:

STRENGTH 2 (please specify) _____

Please indicate the reasons for your answer:

STRENGTH 3 (please specify) _____

Please indicate the reasons for your answer:

[Q8h]

Please identify what you see as the **weaknesses** of your organisation re-structuring and provide explanation. **Again, I have provided space for you to identify the THREE most important weaknesses.** (If you want to identify more than three, please attach an additional page)

WEAKNESS 1 (please specify) _____

Please indicate the reasons for your answer:

[Q8h] Continued

WEAKNESS 2 (please specify) _____

Please indicate the reasons for your answer

WEAKNESS 3 (please specify) _____

Please indicate the reasons for your answer

[Q8i]

Has your organisation's restructuring (to your knowledge) impacted upon or affected the management operations of other disaster relevant organisations?

Yes No Don't Know

If YES, please explain how and why (in your view) your organisation's restructuring has affected the management operations of other disaster relevant organisations? Also, please name the organisation(s)

Amalgamation of Services

More effective inter-organisational relationships have been used to argue a move to integrate or amalgamate similar services or functions into large mega-departments. Other arguments for amalgamation of services include: greater economies of scale, pooling of operating resources and trained personnel, increased borrowing power, and reduced duplication of services. Rather than arguing for or against the position, I would like to seek your views on these issues.

[Q9a]

Would amalgamating your organisation with other disaster relevant organisations lead more effective management at an operational level during disasters?

Yes It Depends No Don't Know

Please explain:

[Q9b]

In your considered view would amalgamating your organisation with other disaster relevant organisations reduce duplication of services?

Yes It Depends No Don't Know

Please explain:

[Q9c]

Would improved inter-organisational relations result from amalgamating your organisation with other disaster relevant organisations?

Yes It Depends No Don't Know

Please explain:

APPENDIX B

**List of Major Disasters Since June 1967
(including source zone maps)**

Compiled by the Insurance Council of Australia 1996

MAJOR DISASTERS SINCE JUNE 1967

REVISED TO 31 DECEMBER 1995

(Including only events likely to cost \$10 million or more in 1992 values
or at time of event if after 1992)

<u>Date</u>	<u>Event</u>	<u>Insurance Loss</u>	
		<u>Original Dollars</u> SM	<u>Dec 1995</u> <u>Dollars</u> SM
Feb 1967	Bushfires, Hobart, Tas	14	96
June 1967	Rain and Hail, Brisbane, Qld	Approx 5	34
Oct 1968	Earthquake, WA	1.5	12
Jan 1970	T. Cyclone 'Ada', Qld	12	75
Aug 1970	Flooding, Tas	Approx 5	29
Feb 1971	Flooding, Gippsland, Vic	Over 2	12
Dec 1971	Cyclone 'Althea', Townsville, Qld	Over 25	140
Feb 1972	T. Cyclone 'Daisy', Qld	2	12
Mar 1973	Cyclone 'Madge', Qld, NT, WA	30	143
Jan/Feb 1974	T. Cyclone 'Wanda', Brisbane Floods, Qld	68	312
Mar 1974	T. Cyclone 'Zoe', NSW, Qld	Over 2	12
Apr 1974	Flooding, Sydney, NSW	20	93
May 1974	Flooding, Vic	Over 4	19
May 1974	Wind & Hail, Sydney, NSW	20	93
Dec 1974	T. Cyclone 'Tracy', Darwin, NT	200	798

		<u>Insurance Loss</u>		
<u>Date</u>	<u>Event</u>	<u>Original Dollars</u>	<u>Dec 1995</u>	
		<u>\$M</u>	<u>Dollars</u>	
			<u>\$M</u>	
March 1975	Flooding, Sydney, NSW	15	60	
Dec 1975	Cyclone 'Joan', WA	20	70	
Jan 1976	Hailstorm, Toowoomba, Qld	12	47	
Feb 1976	Cyclone 'Beth' Bundaberg, Qld	3	12	
Nov 1976	Hailstorm, NSW	40	125	
Dec 1976	T. Cyclone 'Ted', Qld	15	47	
Jan 1977	Thunderstorms, NSW	15	47	
Feb 1977	Storm, Tongala, Echuca, Vic	4	13	
Feb 1977	Fires, Western District, Vic	9	28	
March 1977	Floods, NSW	5-7	22	
Feb 1978	Storms, Sydney, Newcastle and Wollongong, NSW	10-15	42	
Mar 1978	Storms, North Coast, NSW	3-5	15	
Apr 1978	T. Cyclone 'Alby', WA	13	37	
June 1978	Wind and Floods, Sydney, NSW	5-7	19.5	
Mar 1979	T. Cyclone 'Hazel', WA	15	39	
June 1979	Earthquake, Cadoux, WA	3.5	12	
Nov 1979	Hail Storm, SA	10	23	
Feb 1980	T. Cyclone 'Dean', Pilbara, WA	20	47	
Feb 1980	Bushfires, Adelaide Hills, SA	13	32	
Dec 1980	T. Cyclones, Brisbane, Qld	7.5	16	
Dec 1980	Storm, Brighton, Qld	15	34	
Feb 1981	Floods, Dalby and storms, Qld	20	47	
Nov 1982	Storm, Melbourne District, Vic	8-10	18	

		<u>Insurance Loss</u>	
<u>Date</u>	<u>Event</u>	<u>Original Dollars</u>	<u>Dec 1995 Dollars</u>
		\$M	\$M
Feb 1983	Bushfires (Ash Wednesday) (single event), Vic	138)	243
Feb 1983	Bushfires (Ash Wednesday) (single event), SA	38)	66
March 1984	Cyclone 'Kathy', NT	5 (3 marine, 2 loss of profits)	12
Nov 1984	Floods, NSW	80	126
Sept 1984 to Feb 1985	Bushfires, NSW	25	43
Jan 1985	Storms, Brisbane, Qld	180	285
Sept 1985	Hailstorms, Melbourne, Vic	10	16
Jan 1986	Hailstorm, Orange, NSW	25	39
Jan 1986	T. Cyclone 'Winifred', Cairns to Ingham, QLD	40	62
Aug 1986	Storms and floods, Sydney NSW	35	51
Oct 1986	Hailstorm, Western Suburbs, Sydney, NSW	104	153
Dec 1986	Storm, Adelaide, SA	10	15
Feb 1987	Bushfires, Southern Tas	7	12
Nov/Dec 1987	Rain and Floods, Melbourne Vic	8	12

Insurance Loss

<u>Date</u>	<u>Event</u>	<u>Original Dollars</u>	<u>Dec 1995 Dollars</u>
		SM	SM
Apr 1988	Floods, Alice Springs, NT	10	14
Apr 1988	Floods, Sydney, NSW	25	34
May 1988	T. Cyclone 'Herbie', Carnarvon to Derham, WA	20 including ship - Korea Star	28
Sept 1988	Storms, Widespread, WA	8	12
Nov 1988	Rainstorms, Vic	11	15
Feb 1989	Rainstorms, Melbourne, Vic	17	22
Apr 1989	T. Cyclone 'Aivu', Qld	26	33
Nov 1989	Hailstorm, Ballarat, Vic	17-20	23
Dec 1989	Earthquake, Newcastle, NSW	800	1071
Feb 1990	Hailstorm, Dubbo, NSW	9	12
Feb 1990	T. Cyclone 'Nancy' Queensland and NSW	33	40
Feb 1990	Hailstorm, Sydney, NSW	10	12
Mar 1990	Hail, Sydney, NSW	319	366
April 1990	Floods, South Qld and Western NSW	30	36
Aug 1990	Storms, Sydney, NSW	12	15
Dec/Jan 1990/91	Flood and Wind, Qld (from T. Cyclone Joy)	Coal Loss 32.0) 30.0)	72
Dec/Jan 1990/91	Bushfires, Vic	10	12
Jan 1991	Storms, Sydney, NSW		215
Jan 1991	Hail, Orpust, Vic		12
Jan 1991	Hail, Adelaide, SA	Revised 1993	28
June 1991	Storms and Floods, South East NSW		15
Oct 1991	Bushfires, NSW, Central Coast		12
Dec 1991	Floods & Water Damage, Melbourne & Ballarat Vic		23
Feb 1992	Storm, Sydney, NSW		113

		<u>Insurance Loss</u>	
<u>Date</u>	<u>Event</u>	<u>Original Dollars</u>	<u>Dec 1995 Dollars</u>
		SM	SM
Sep/Oct 1993	Flood Benalla/Shepparton, Vic		12.0
Dec 1993	Storms, Melbourne, Vic	10	12.0
Jan 1994	Bushfires, NSW	48	53.0
May 1994	Windstorms, Perth, WA	24	37.0
Aug 1994	Earthquake, Cessnock, NSW	34	36.0
Nov 1994	Windstorms, NSW	14	15.0
Nov 1994	Windstorms, NSW	13	14.0
Mar 1995	Cyclone Bobby W.A.		11.0
Apr 1995	T.Cyclone Bobby	10	10.0
Nov/Dec 1995	Hail storms S.E. QLD		38.0
Dec 1995	Storms Hunter Valley NSW		10.0

PACIFIC AREA

		<u>Insurance Loss</u>	
<u>Date</u>	<u>Event</u>	<u>Original Dollars</u>	<u>Dec 1995 Dollars</u>
		SM	SM
Mar 1983	Cyclone 'Oscar', Fiji	55	88.0
Jan 1985	Cyclones 'Nigel' and 'Erica' Fiji	88	141.0
Jan 1987	T. Cyclone 'Rajan', Fiji	10	15.0
Jan 1987	T. Cyclone 'Sally', Cook Islands	20	28.0
Feb 1987	T. Cyclone 'UMA', Vanuatu	25	34.0
Dec 1992	T. Cyclone 'Kina' & 'Joni', Fiji	Estimate	80

<u>Crop Hail Losses</u>	<u>1989/90</u>	<u>1990/91</u>	<u>1991/92</u>	<u>1992/93</u>	<u>1992/94</u>
	\$M	\$M	\$M	\$M	\$M
Victoria	0.66	1.76	3.76	9.0	.08
New South Wales	8.36	1.83	2.20	4.8	1.80
South Australia	2.75	0.82	1.90	16.6	.23
Western Australia	0.94	1.34	0.64	4.2	.33
Queensland	6.40	1.40	0.51	3.0	.35
	19.11	7.15	9.01	37.6	2.8

	<u>Jul 1993</u>
	<u>Dollars</u>
	\$M
Crop 1985/86	50.50
Crop 1986/87	26.50
Crop 1987/88	7.90
Crop 1988/89	7.95
Crop 1989/90	19.11
Crop 1990/91	7.15
Crop 1991/92	9.01
Crop 1992/93	37.60
Crop 1993/94	2.8

TOTAL	168.5
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LL31011



EVENTS SINCE JUNE 1967

Major Events By Zones

Specified Events by Hazards Recorded Since 1967

*Frequencies (Time between Events and
Average over Years Since 1967)*

December 1995
Values

ZONE 1

1990	January/ February	T. Cyclone Nancy (see also Zones 46, 48 and 49)	AS 40.0m
1993	March	T. Cyclone Roger	
1995	Nov/Dec	Hail Storm (see Zone 2)	AS38.0
		Other storms	12
		TOTAL	15 cyclonic storms
		Frequency	7 years to 2 years
		Average	2.0

ZONE 2

1967	June	Hailstorm, Brisbane	AS 34.0m
1974	December	T. Cyclone Wanda/Floods, Brisbane	AS312.0m
1980	December	T. Cyclone, Brisbane	AS 16.0m
1980	December	Windstorm, Brighton	AS 34.0m
1985	January	Hailstorm, Brisbane	AS285.0m
1993	March	T. Cyclone Roger	
1995	Nov/Dec	Hail Storms (see also zone 1)	AS38.0
		Other T. cyclones	5
		Other Storms	18
		TOTAL	30 events
		Frequency	5 years to 3 weeks
		Average	11 months

ZONE 3

2 storm only

Average 13 years

ZONE 4

5 T. Cyclones

1 Flood

Total 6 Events

Average 4.5 years

ZONE 5

1990	December	T. Cyclone Joy, Floods (see also Zones 6, 7, 8, 9 and 10)	AS\$36.0
		No other events	
		TOTAL	1
		Average	25 years

ZONE 6

1990	December	T. Cyclone Joy, Floods (see also Zones 5, 7, 8, 9 and 10) 2 Other Cyclones	AS 36.0m
		TOTAL	3 events
		Frequency	7 years
		Average	8.3 years

ZONE 7

1990	December	T. Cyclone Joy, Floods (see also Zones 5, 6, 8, 9 and 10) 1 Other Cyclone	AS 36.0m
		TOTAL	2 events
		Frequency	11.0 years
		Average	12.5 years

ZONE 8

1970	January	T. Cyclone Ada (see also Zone 9)	AS 75.0m
1990	December	T. Cyclone Joy, Floods Coal Losses (Zone 8 only) (see also Zones 5, 6, 7, 9 and 10)	AS 72.0m
		TOTAL	2 events
		Frequency	20 years
		Average	12.5 years

ZONE 9

1970	January	T. Cyclone Ada (see also Zone 8)	AS 75.0m
1971	December	T. Cyclone Althea	AS 140.0m
1989	April	T. Cyclone Aivu	AS 33.0m
1990	December	T. Cyclone Joy, Floods (see also Zones 5, 6, 7, 8 and 10)	AS 36.0m
		1 other: T. cyclone	
		TOTAL	5 events
		Frequency	10 years to 20 months
		Average	5.0 years

ZONE 10

1986	January	T. Cyclone Winifred (see also Zone 11)	AS 62.0m.
1990	December	T. Cyclone Joy, Floods (see also Zones 5, 6, 7, 8 and 9) 1 Other T. Cyclone	AS 36.0m.
		TOTAL	3 events
		Frequency	4 years
		Average	8.3 years

ZONE 11

1973	March	T. Cyclone Madge (see also Zones 12,18,19,20)	AS143.0m
1978	December	T. Cyclone Winifred (see also Zone 10)	AS 62.0m
1978 to 1981		4 other T. cyclones	
		TOTAL	6 events
		Frequency	5 years to 2 years
		Average	4.5 years

ZONE 12

1973	March	T. Cyclone Madge (see also Zones 11,18,19,20)	AS143.0m
		6 other T. cyclones	
		TOTAL	7 events
		Frequency	8 years to 2 years
		Average	3.9 years

ZONE 13

No Events

ZONE 14

1976	December	T. Cyclone Ted	AS 47.0m
		3 other T. cyclones	
		TOTAL	4 events
		Frequency	9 years to 4 years
		Average	6.2 years

ZONE 15

1976	January	Hailstorm, Toowoomba	AS 47.0m
1981	February	Floods, Dalby	AS 47.0m
1990	April	Floods (South West Qld and North West NSW)	AS 37.5m
		13 other storms	
		TOTAL	15 events
		Frequency	5 years to 2 months
		Average	1.6 years

ZONE 16

1978 to 1981		2 T. cyclones only	
1992	April	T. Cyclone Neville	No damage
		Frequency	3 years
		Average	12.5 years

Note Other T. cyclones formed but did not threaten coast.

ZONE 17

1974	December	T. Cyclone Tracy	AS798.0m
1981 to 1987		2 other T. cyclones	
		1 storm	
		6 earthquakes	
		TOTAL	10 events
		Frequency	7 years to 2 years
		Average	2.7 years

ZONE 18

1973	March	T. Cyclone Madge (See Zones 11,12,19,20)	AS143.0m
1984	March	T. Cyclone Kathy	AS 12.0m
1988	April	Floods, Alice Springs	AS 14.0m
1982 to 1987		3 other T. cyclones	
1983 to 1989		4 Floods, Alice Springs	
1988	January	Earthquake, Tennant Creek	
		TOTAL	11 events
		Frequency	11 years to 1 year
		Average	2.3 years

ZONE 19

1973	March	T. Cyclone Madge (See Zones 11,12,18,20)	AS143.0m
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38 other T. cyclones

1 Flood

40 events

Frequency 1 year to days

Average 0.6 years

Note Some also included in Zone 20**ZONE 20**

1973	March	T. Cyclone Madge (See Zones 11,12,18,19)	AS143.0m
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1975	December	T. Cyclone Joan	AS 70.0m
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1980	February	T. Cyclone Dean	AS 47.0m
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32 other T. cyclones

1 Flood

TOTAL 36 events

Frequency 12 years to weeks

Average 0.7 years

ZONE 21

1978	April	T. Cyclone Alby (see also Zone 22)	AS 37.0m
1979	March	T. Cyclone Hazel	AS 39.0m
1988	May	T. Cyclone Herbie	AS 28.0m
1995	February	T. Cyclone Bobby (See also Zone 22)	AS 10.0m
		1 other T. cyclone	
		TOTAL	5 events
		Frequency	5 years to 1 year
		Average	5.6 years

ZONE 22

1978	April	T. Cyclone Alby (see also Zone 21)	AS 37.0m
1983	June to September	Windstorms, WA (see also Zone 23)	AS 12.0m
1984	January	Hailstorm	AS 8.0m
1991	August	Storms, Perth	AS 4.0m
1992	February	Rainstorm, Perth	AS 4.0m
1994	May	Windstorm, Perth and South West (See also Zone 23)	AS 37.0m
1995	February	T. Cyclone Bobby (See also Zone 21)	AS 10.0m
		9 other storms	
		TOTAL	16 events
		Frequency	7 years to 1 month
		Average	1.7 years

ZONE 23

1983	June to September	Windstorm, Bunbury (see also Zone 22)	AS 12.0m
1994	May	Windstorm (See Zone 22)	AS37.0m
		1 other storm	
		TOTAL	3 events
		Frequency	5 years
		Average	9.0 years

ZONE 24

1968	October	Earthquake, Meckering	AS 12.0m
1979	June	Earthquake, Cadoux	AS 12.0m
		3 other earthquakes	
		1 hail storm	
		1 tornado	
		TOTAL	7 events
		Frequency	11 years to 4 months
		Average	4.0 years

ZONE 25

No Events

ZONE 26

1979	November	Hailstorms	A\$ 23.0m
1991	January	Hailstorms, Adelaide (see Zone 27)	A\$ 28.0m
		1 other storm	
		TOTAL	3 events
		Frequency	12 years to 4 years
		Average	8.3 years

ZONE 27

1991	January	Hailstorms (see Zone 26)	A\$ 28.0m
		9 other storms and floods	
		TOTAL	10 events
		Frequency	6 years to 1 month
		Average	2.6 years

ZONE 28

1980	February	Bushfires, Hills Area	AS 32.0m
1983	February	Bushfires, Hills Area, (Ash Wednesday) (see also Zones 30 and 31)	AS 66.0m
Other events - 3 storms			
TOTAL		5 events	
Frequency		2 years to 8 months	
Average		5.8 years	

ZONE 29

1967	February	Bushfires, Hobart	AS 96.0m
1982	February	Bushfires, Hobart	AS 12.0m
1987	February	Bushfires, Southern Tasmania	AS 12.0m
6 storms			
3 other fires			
TOTAL		12 events	
Frequency		10 years to 2 months	
Average		2.0 years	

ZONE 30

1976	November	Tornado, Castlemaine/Sandon	A\$ 12.0m
1977	February	Bushfires, Western District	A\$ 28.0m
1983	February	Bushfires, Ash Wednesday (see also Zones 31, 33 and 34)	A\$243.0m
1988	November	Hailstorms	A\$ 15.0m
1989	November	Hailstorms, Ballarat	A\$ 22.0m
1991	December	Floods, Ballarat	A\$ 12.0m
1993	Sep/Oct	Floods, Benalla/Shepparton	A\$ 12.0m
		2 other bushfires	
		7 other storms	
		TOTAL	16 events
		Frequency	6 years to 1 month
		Average	1.6 years

ZONE 31

1983	February	Fires, Ash Wednesday (see also Zones 30, 33 and 34)	A\$243.0m
		3 storms	
		TOTAL	4 events
		Frequency	10 years to 22 months
		Average	6.2 years

ZONE 32

1971	February	Floods, Gippsland	A\$ 12.0m
		4 storms	
		1 Other Flood	
		1 bushfire	
		TOTAL	7 events
		Frequency	13 years to 14 months
		Average	3.7 years

ZONE 33

1974	May	Floods and hailstorm	AS 19.0m
1982	November	Storms	AS 18.0m
1983	February	Bushfires. Ash Wednesday (see also Zones 30, 31 and 34)	AS243.0m
1984	March	Storms, Melbourne	AS 12.0m
1985	September	Hailstorms, Melbourne	AS 16.0m
1987	November/ December	Rainstorms, Melbourne	AS 12.0m
1989	February	Rainstorm, Melbourne	AS 22.0m
1993	December	Storms (Wind and Rain) (see also Zone 34)	AS 12.0m

24 other storms and floods

TOTAL 32 events

Frequency 8 years to
1 month

Average 0.84 years

ZONE 34

1983	February	Bushfires. Ash Wednesday (see also Zones 30, 31 and 33)	AS243.0m
1993	December	Storms (Wind and Rain) (See Zone 33)	AS 12.0m

1 storm

2 other events

Average 5.4 years

ZONE 35

1991	January	Hailstorms (Orbost)	A\$ 12.0m
1991	July	Storms and Floods, South East NSW (see also Zones 40 and 41)	A\$ 15.0m
		3 other storms and fires in State Forests	
		TOTAL	5 events
		Frequency	23 years to 6 months
		Average	5.6 years

ZONE 36

1991	January	Bushfires, Vic	A\$ 12.0m
		3 other bushfires (2 Vic, 1 NSW)	
		9 storms and floods	
1993	Sept/Oct	Floods, Benalla/Shepparton	A\$ 12.0m
		TOTAL	14 events
		Frequency	4 years to 5 months
		Average	1.8 years

ZONE 37

		2 bushfires	
		1 hailstorm	
1993	Sept/Oct	Floods, Shepparton/Benalla	AS 12.0m
		TOTAL	4 events
		Frequency	2 years
		Average	6.5 years

ZONE 38

1986	January	Hailstorms, Western District NSW	AS 39.0m
		3 storms	
		1 bushfire	
		TOTAL	5 events
		Frequency	11 years to 1 year
		Average	5.4 years

ZONE 39

3 bushfires

1 storm and flooding

TOTAL 4 events

Frequency 6 years to
1 year

Average 6.2 years

ZONE 40

1978	February	Thunderstorms (see also Zones 41, 42 and 46)	AS 42.0
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1991	June/July	Storms and Floods, South East NSW (see also Zones 35 and 41)	AS 15.0m
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1 other storm and
bushfires in State Parks

TOTAL 3 events

Frequency 10 years to
3 years to
5 months

Average 8.3 years

ZONE 41

1974	April	Storms and Floods (see also Zones 42 and 43)	A\$ 93.0m
1978	February	Thunderstorms (see also Zones 40, 42 and 46)	A\$ 42.0m
1978	June	Rainstorms (see also Zone 42)	A\$ 20.0m
1984	November	Storms and Floods (see also Zones 42 and 43)	A\$126.0m
1990	February	Hail and Rain, Sydney (see also Zones 42 and 43)	A\$ 12.0m
1990	March	Hailstorm, Sydney (see also Zones 42 and 43)	A\$366.0m
1990	August	Storms, Sydney (see also Zone 42)	A\$ 14.5m
1991	June/July	Rain and Floods, South East NSW (see also Zones 35 and 40)	A\$ 15.0m
1994	January	Bushfires (see also Zones 43, 46, 49)	A\$ 53.0m
1994	November	Windstorms, Sydney (see also Zones 42 and 43)	A\$29.0m

4 other storms

TOTAL 14 events

Frequency 5 years to
1 month

Average 2 years

ZONE 42

1974	April	Storms and Floods, Sydney (see also Zones 41 and 43)	A\$ 93.0m
1974	May	Hailstorms and Floods, Sydney (see also Zone 43)	A\$ 93.0m
1975	March	Rainstorms and Floods, Sydney (see also Zone 43)	A\$ 60.0m
1976	November	Hail (see also Zone 43)	A\$125.0m
1977	January	Thunderstorms (see also Zone 43)	A\$ 47.0m
1978	February	Thunderstorms (see also Zones 40, 41 and 46)	A\$ 42.0m
1978	June	Thunderstorms (see also Zone 41)	A\$ 20.5m
1984	November	Floods (see also Zones 41 and 43)	A\$126.0m
1986	August	Floods (see also Zone 43)	A\$ 51.0m
1986	October	Hailstorm (see also Zone 43)	A\$153.0m
1988	April	Floods, Sydney (see also Zone 43)	A\$ 34.0m
1990	February	Hail and Rain, Sydney (see also Zones 41 and 43)	A\$ 12.0m
1990	March	Hailstorm, Sydney (see also Zones 41 and 43)	A\$366.0m

ZONE 42 (Continued)

1990	August	Storms, Sydney (see also Zone 41)	AS 14.5m
1991	January	Windstorms, Sydney (see also Zone 43)	AS215.0m
1994	November	Windstorms, Sydney (see also Zones 41 and 43)	AS 29.0m
		6 other storms	
		TOTAL	22 events
		Frequency	5 years to less than 1 months
		Average	1.2 years

ZONE 43

1974	April	Floods, Sydney (see also Zones 41 and 42)	AS 93.0m
1974	May	Hailstorms, Sydney (see also Zone 43)	AS 93.0m
1975	March	Floods, Sydney (see also Zone 42)	AS 60.0m
1976	November	Hailstorm, Sydney (see also Zone 42)	AS125.0m
1977	January	Thunderstorms, Sydney (see also Zone 42)	AS 47.0m
1977	March	Floods, Sydney	AS 21.0m
1984	November	Floods, Sydney (see also Zones 41 and 42)	AS126.0m
1986	August	Floods, Sydney (see also Zone 42)	AS 51.0m

ZONE 43 (Continued)

1986	October	Hailstorm, Sydney (see also Zone 42)	A\$153.0m
1988	April	Floods, Sydney (see also Zone 42)	A\$ 34.0m
1990	February	Hail and Rain, Sydney (see also Zones 41 and 42)	A\$ 12.0m
1990	March	Hailstorm, Sydney (see also Zones 41 and 42)	A\$366.0m
1990	August	Storms, Sydney (see also Zone 41)	A\$ 13.5m
1991	January	Windstorm, Sydney (see also Zone 42)	A\$215.0m
1992	February	Windstorm, Sydney	A\$113.0m
1994	January	Bushfires (see also Zones 41, 46, 49)	A\$ 53.0m
1994	November	Windstorms, Sydney (see also Zones 41 and 42)	A\$29.0m
1995	May	Earth Temor (Blue Mountains)	
		5 other storms	
		1 waterspout	
		TOTAL	24 events
		Frequency	7.7 years to weeks
		Average	1.2 years

ZONE 44

	1 Flood	
	Frequency	25 years
	Average	25 years

ZONE 45

1977

1 Bushfire

1 event only

Average 25 years

ZONE 46

1978	February	Thunderstorms	AS42.0m
		(see also Zones 40, 41 and 42)	
1989	December	Earthquake, Newcastle	AS1071m
1990	January/ February	T. Cyclone Nancy, NSW (see also Zones 1, 48 and 49)	AS 40.0m
1994	January	Bushfires (see Zones 41, 42, 49)	Part of total of AS 53.0m
1994	August	Earthquake, Cessnock	AS 36.0m
1995	Dec	Storms Hunter Valley	AS 10.0

1 other storm

TOTAL 7 events

Frequency 11 years to
2 months

Average 4.0 years

ZONE 47

1990	February	Hailstorm, Dubbo	AS 12.0m
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1 Other Hailstorm

TOTAL 2 events

Frequency 23 years to
3 weeks

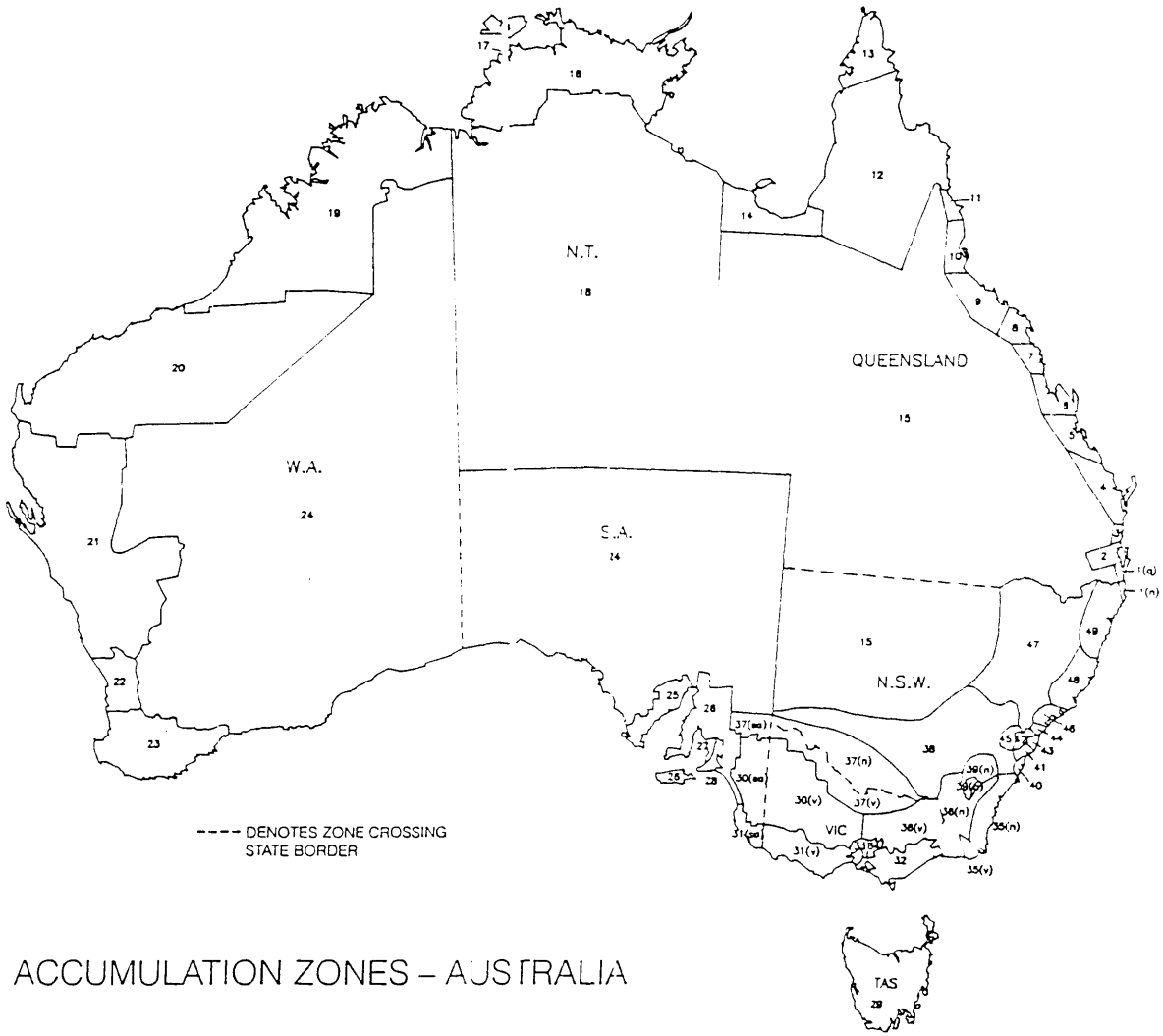
Average 12.5 years

ZONE 48

1990	January/ February	T. Cyclone Nancy (see a.so Zones 46 and 49)	AS 40.0m.
		TOTAL	1 event
		Average	25 years

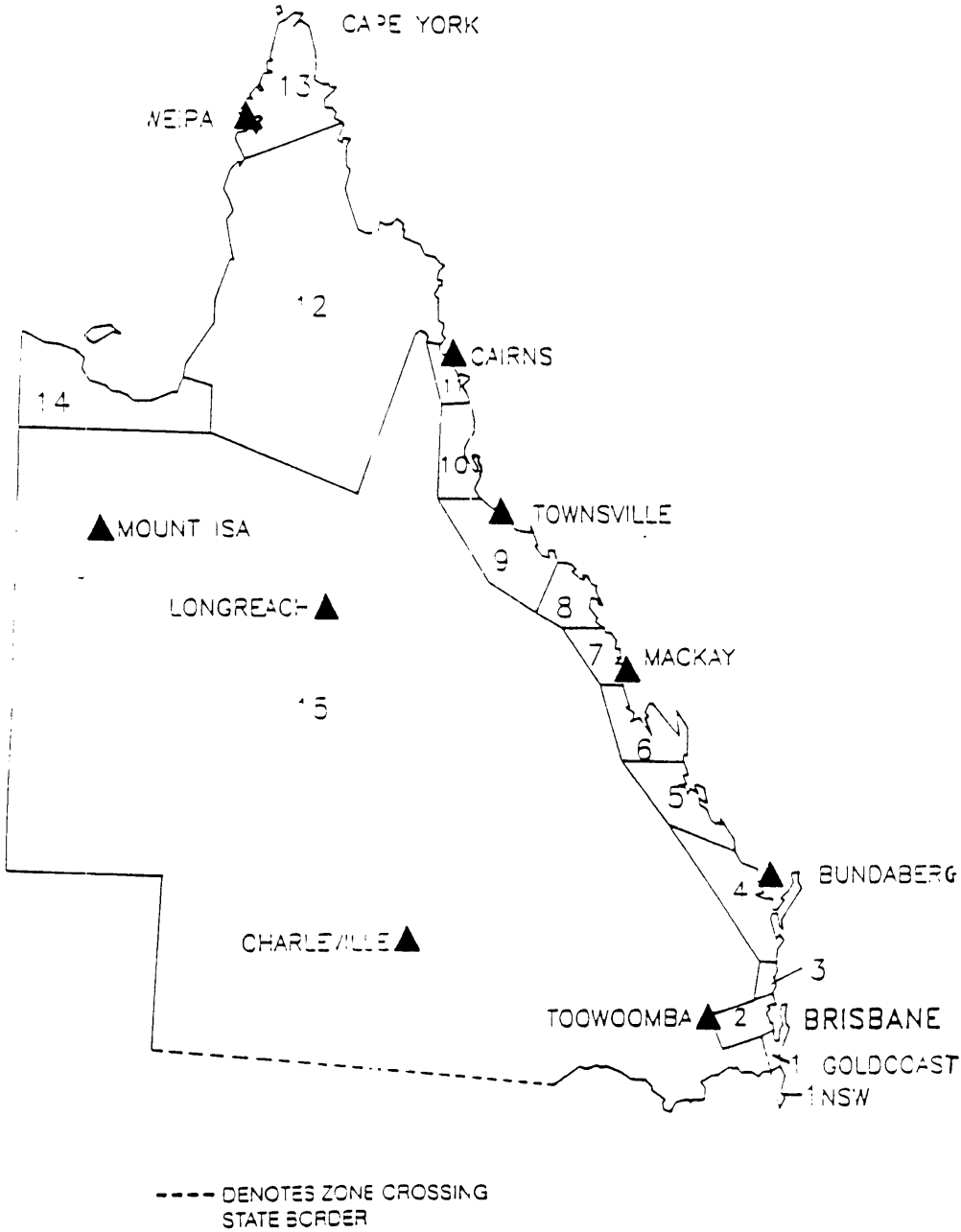
ZONE 49

1990	January	Cyclone Nancy (see also Zones 1, 46 and 48)	AS 40.0m
1994	January	Bushfires (see Zones 41, 43, 46)	Part of total of AS 53.0m
		3 Other Cyclones and Floods	
		1 storm	
		TOTAL	6 events
		Frequency	7 years to 2 years
		Average	4.5 years

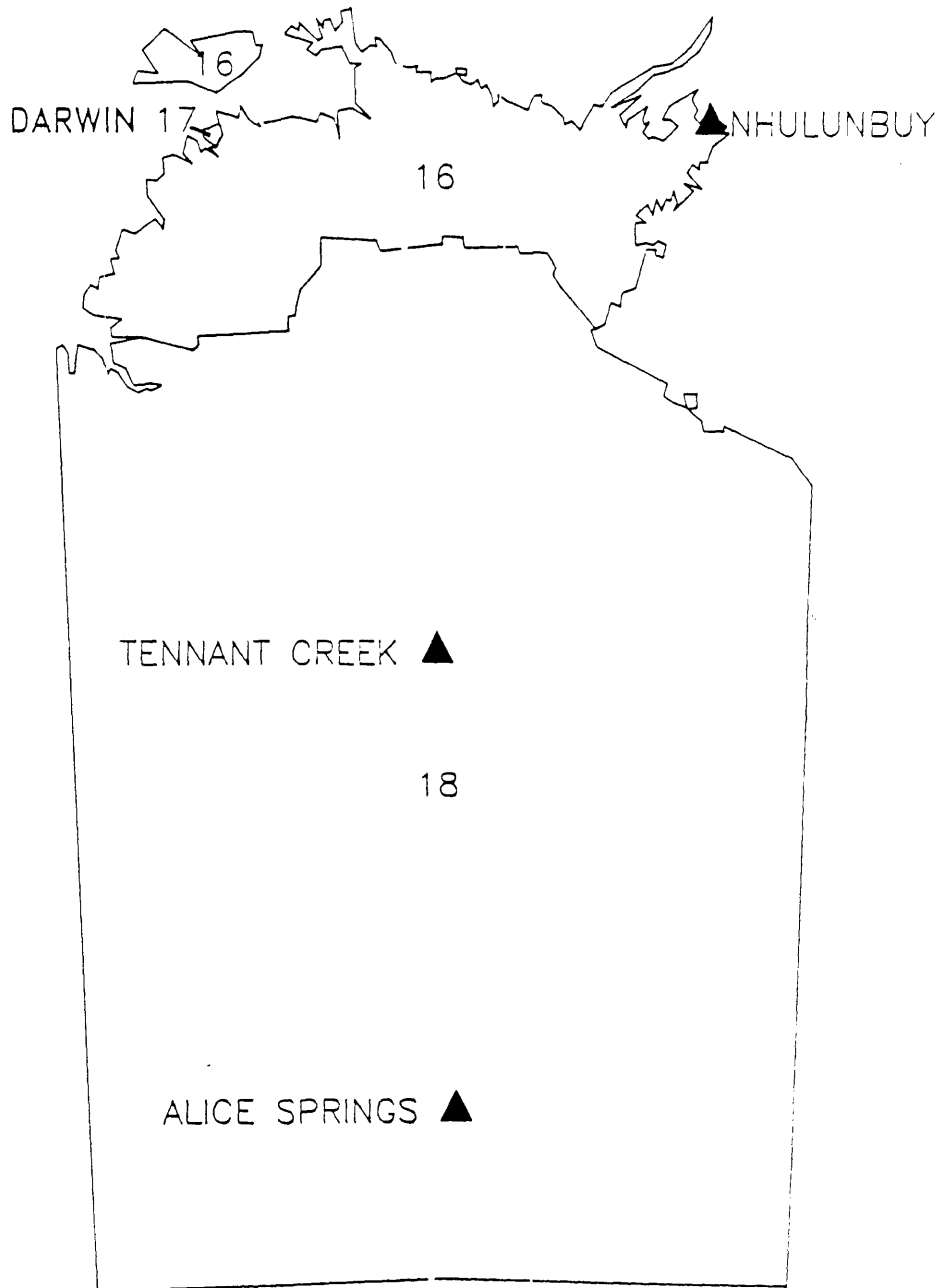


ACCUMULATION ZONES – AUSTRALIA

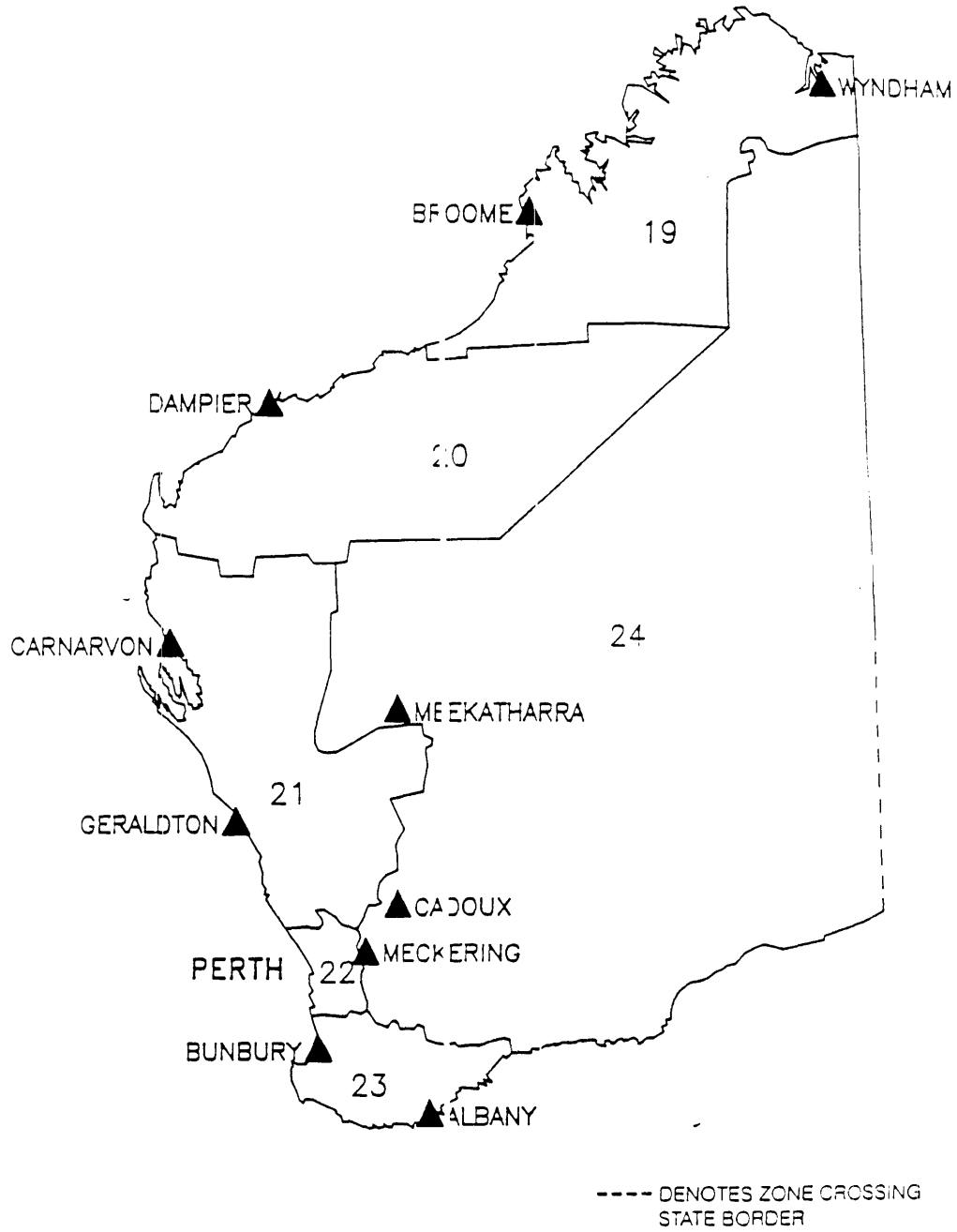
ACCUMULATION ZONES – QUEENSLAND



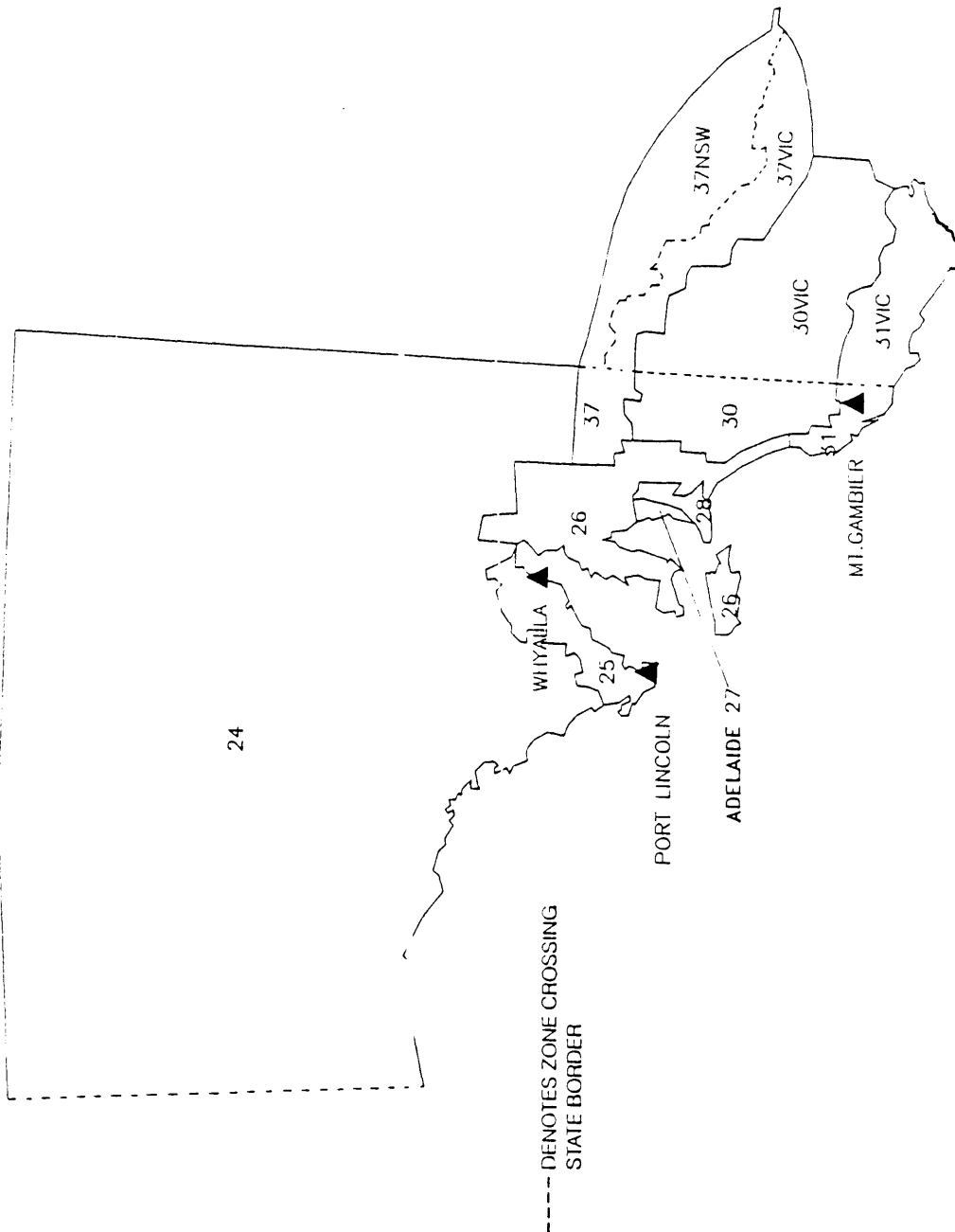
ACCUMULATION ZONES – N.T.



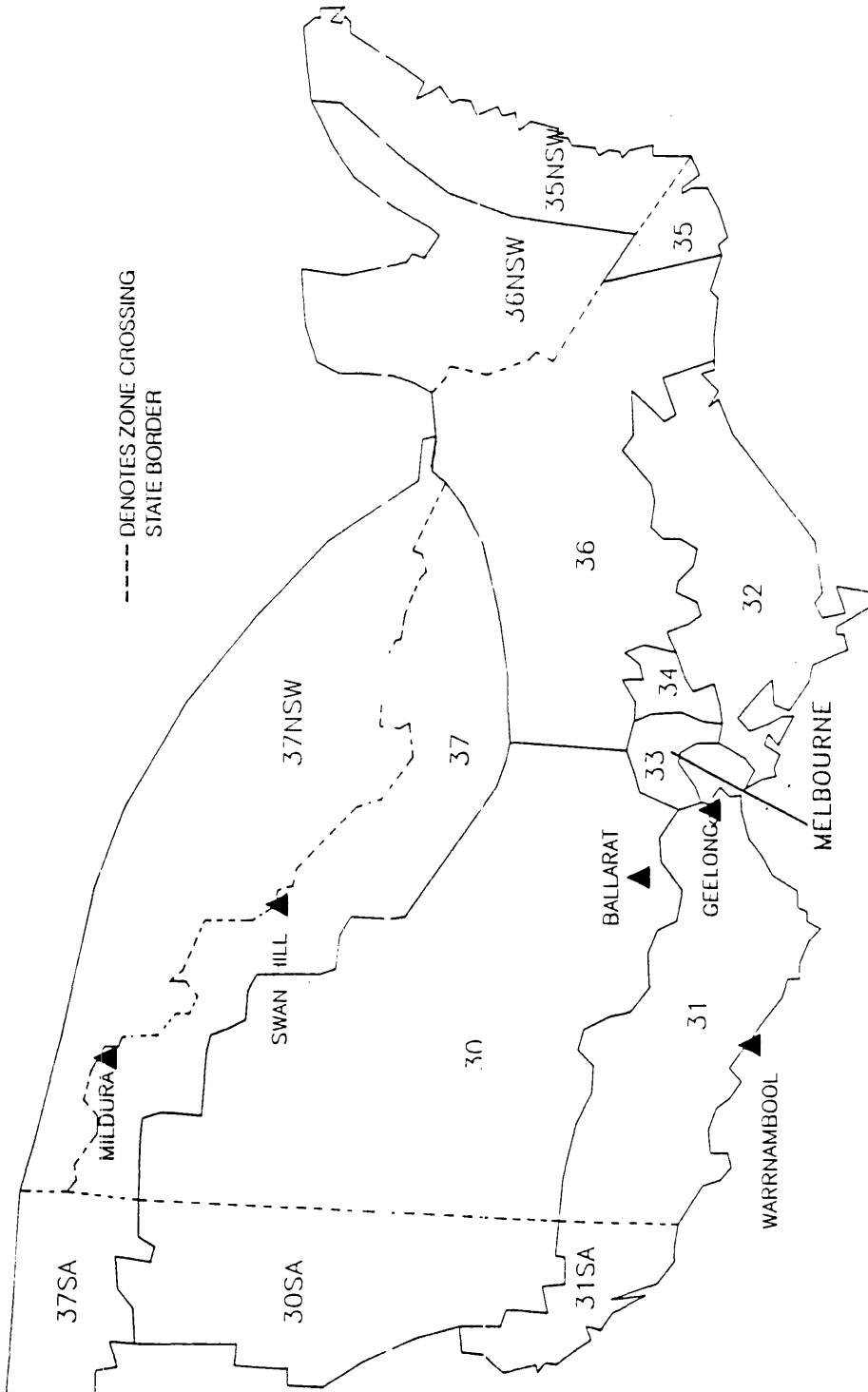
ACCUMULATION ZONES – W.A.



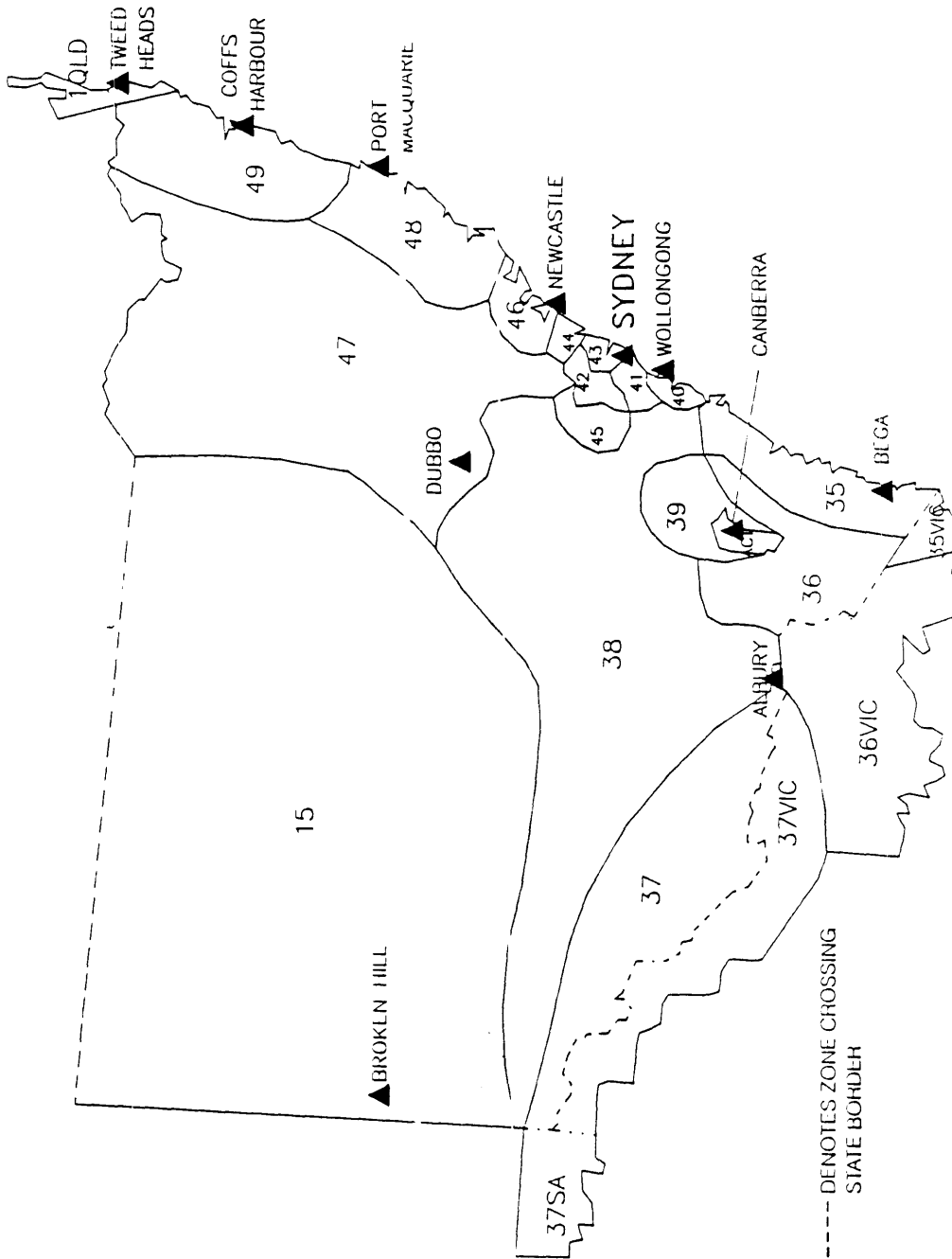
ACCUMULATION ZONES – S.A.



ACCUMULATION ZONES – VICTORIA



ACCUMULATION ZONES – N.S.W.



ACCUMULATION ZONES – TASMANIA

