

EMERGENCY RESPONSE TO THE WOLLONGONG FLOODS, AUGUST 1998 – AN SES PERSPECTIVE.

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To provide a better understanding of the context in which this paper has been written, set out below is a brief log of the event and some of the response activity that was implemented:

- Monday 17th.
- SES issued a media release warning of flash flooding at noon on Monday 17th.
- Director General SES issued an advice within SES regarding landslip potential.
- SES units in Southern Sydney and Illawarra were already heavily committed by late Monday afternoon.
- Monday night event was very fast moving, flash flooding.
- Response for assistance was often impossible due to access.
- Rescue dominated virtually no property protection.
- Calls for help fragmented across a number of emergency services.
- Most areas were isolated until at least 2100 hours.
- Timing was about the worst possible ie workers travelling home, parents trying to drive children to/from activities, darkness.
- Outside assistance was organised very early on Monday night.
- Rural Fire Service provided a large (200) initial contingent from Southern Sydney as SES crews were committed to Metro flood/storm damage response.
- Tuesday 18th.
- There were problems with control arrangements during the event. These have since been sorted out. Apart from Monday night, which was a rescue driven period best managed by Police, the event was a flood damage operation for which the SES is the legislated combat agency.
- DG SES met with LEOCon Wollongong to discuss arrangements. Decision made to establish sectors to cope with magnitude of work. Plan was to allocate services to sectors and carry out quick reconnaissance to determine worst areas within each sector then begin help immediately.
- The sector management concept was slow to gear-up. The fire services, because of their response training, assumed reconnaissance meant look for life in danger, report results, then wait for later clean-up. In the SES sectors, where teams were used to the nature of flood/storm response work, clean-up and assistance began immediately.
- When it was discovered that work was not progressing at an acceptable pace in all sectors, SES liaison officers were sent in to all RFS sectors. This was not done for the Sector being managed by NSW Fire Brigades.
- Once SES liaison was in place and the requirements were explained, the Rural Fire Service teams came to a quick understanding of the work required.
- Wednesday 19th

- The SES State Operations Centre began to directly provide plant and equipment to SES and RFS sectors where work was often at a standstill because of lack of resources requested through other channels. This accelerated the clean-up operation.
- The SES has direct access to the Natural Disaster Relief Arrangements (NDRA) funding. Using the Emergency Order system can access resources from the private sector without a complicated red-tape system. The authority to write orders is delegated to the three levels; State Headquarters, SES Division Controllers, and SES Local Controllers.
- This delegation to ALL operational levels creates great flexibility and SPEED.

The event in Wollongong has been described in many different ways but from an SES perspective the event was definitely a flood response operation. In an operational context the SES is not concerned with why water is where it is. A flood can be considered as water in places where it is not normally supposed to be and which threatens loss of life and/or damage to property. Whether the flood producing rain originates from a heavy downpour directly over the affected area or whether it falls over a distant part of the catchment before flowing through the area, it is only the timing of the SES response that is changed. A flood can also originate from the so called sunny day failure of a water storage structure or the effect of elevated ocean levels during coastal storms.

It is certainly recognised by this Service that not all places affected in Wollongong were inundated by water breaking the banks of watercourses. The heavy rainfall created cross-country flow which clearly caused water to enter buildings which were not near watercourses. The author's own property, high on a hillside, was filled to a water depth of over 150mm because overland flow could not get out under neighbouring steel fences. Within several hundred metres downhill of this property however, it was obvious that watercourses were overflowing and floodwater was rising back along adjacent streets and inundating vehicles, businesses and houses.

From an operational viewpoint the timing of the event could not have been worse. Roads began to close early in the afternoon when many people were trying to get home from work and parents were out driving children to and from activities. When the peak of the heavy rainfall and flooding occurred, it was dark and people could not see what was happening around them.

Early on Monday because of persistent heavy rain, there were indications that serious flooding could occur in the Wollongong area and surrounding suburbs. In response to those signs, the SES Illawarra South Coast Division issued a media release at 12 noon, warning of the potential for flash flooding.

The nature of the landscape of Wollongong presented an additional difficulty. The area is a narrow coastal strip interrupted by many short watercourses. These originate along the cliffs of the escarpment to the west and flow down steep channels to the wetlands and beaches in the east. The main north-

south transport links cross these many watercourses. This landscape effectively created dozens of isolated communities cut off from each other by flooded roads.

Emergency services are located in only a few places along this coastal strip and therefore during the 6 hours when conditions were at their worst, only those people directly beside an emergency service facility could be reached. Many emergency service personnel could not reach their own headquarters until late on Monday night.

Under the State Emergency and Rescue Management Act (1989) (SERM Act) one of the functions of the NSW State Disaster Plan (DISPLAN) is to identify **the combat agency primarily responsible** to deal with a particular emergency (threat). That agency is chosen because it has the expertise and appropriate resources to deal with the threat. Where no combat agency is identified (eg earthquake, landslip), the Local Emergency Operations Controller (LEOCon) or District Emergency Operations Controller (DEOCon) assumes control. When requested to do so by a combat agency, a LEOCon or DEOCon may provide support.

From about 1900hrs to 2300hrs on Monday evening the event was dominated by rescue situations. The NSW Police are the designated combat agency for rescue under DISPLAN. There was also a considerable threat of landslip along the escarpment. There is no designated combat agency for landslip so under DISPLAN the LEOCon at local government level and the DEOCon at emergency management district level (when more than one local government area is affected) assumed control of such landslip incidents. Inter-woven with all this other activity, a major flood response operation was also required and under DISPLAN the SES is the designated combat agency for floods.

During the first 4-6 hours people calling for help rang any telephone number they could find which looked like it could be an emergency service. For example the SES's State Headquarters, an administrative and coordination centre which is coincidentally located in Wollongong, was inundated with calls from the public seeking help. As a result of the calling pattern, the requests for help and assistance from the public were fragmented across almost all emergency services and in turn across many locations.

While operators within each of the services recorded the requests, they were often unable to offer any indication of the nature or timing of a response. This was due to the volume of the requests coming in, the consequential difficulty in trying to prioritise them (except for the obvious life at risk category), the fact that many location could not be reached, and uncertainty about what emergency service resources were available.

On Monday night, in consultation with the Wollongong City LEOCon, the SES established a dedicated call taking facility at the Illawarra South Coast Division headquarters (also coincidentally located in Wollongong). This service, for people seeking help with flood damage, was advertised over the local

radio stations and was effective in taking some pressure off the 000 system. The centre took 5,000 calls during the event.

The scenario of large numbers of people calling for assistance in a short time period is familiar to the SES because in large scale severe storm impacts, a similar calling pattern occurs. This is why the Service uses a sector management approach to provide assistance in large scale events. Instead of trying to manage a massive paper war, dealing with hundreds or even thousands of recorded telephone requests, the sector approach uses a simple and effective method. Get teams of personnel and equipment out in the field, find the worst affected areas, and get stuck into the job of helping people.

This approach is not guaranteed to find every person in need but it has been proven to get the clean up and recovery process moving long before the alternative paper based approach. Once the bulk of the work is being attended to, a more detailed reconnaissance and media campaign will locate the isolated cases. Getting emergency services into the field where they are visible and directly approachable, also takes the pressure of the telephone based system. This is because people can communicate directly to emergency service workers and most important, can see that a response is happening.

Early in the morning of Tuesday the 18th, the Director General of the SES visited the Local Emergency Operation Centre (LEOC) and it was agreed that the sector approach would be implemented at first light. The SES was already mobilising large numbers of SES and Rural Fire Service (RFS) volunteers from outside Wollongong. SES volunteers were heavily committed to flood and storm damage operations in the southern suburbs of Sydney. Fortunately the RFS were able to respond over 200 of their volunteers from Sydney and these people arrived in Wollongong early Tuesday morning.

For the next several days the response operation was a repetitive large scale resource management task. Personnel and equipment were the main requirements. Personnel from SES, RFS, Police, and NSW Fire Brigades were brought in from many of the adjacent areas of NSW. On any one day there were up to 450 personnel committed to the flood clean-up operation. A total of 41 SES volunteer units sent teams into Wollongong over the seven days of the operation.

The sector management approach got off to a slow start because of an assumption which proved to be invalid. The original plan was that each sector or group of sectors was allocated to separate emergency service task force under their own control and command. Of the six defined sectors, the two northern sectors were SES, the next three middle sectors were RFS, and the final southern sector was NSW Fire Brigades.

The assumption was that all task forces understood the sector management approach. Never assume anything!! The fire services, because of their specific response training, carried out reconnaissance to look for life in

danger, reported results back to a central point, then waited for instructions and tasking. In the SES sectors, where teams were familiar with the concept of large scale flood/storm response work, reconnaissance resulted in immediate local action and clean-up. Reporting back for the SES teams was a matter of confirmation of **tasking decided within the sector** and most important, requesting equipment for the clean-up operation.

When the Director General of SES discovered that there was some misunderstanding about what was required in the sectors, an SES officer was allocated to each of the RFS sectors. Although tasking was then under the control of SES, command of RFS personnel remained with RFS officers. The Sector being managed by NSW Fire Brigades where landslip was a concern, remained under control of the Wollongong City LEOCon.

Supply of equipment and specialist advice eg engineering was also problematic in the early stages. The RFS task force was sending requests for equipment for their sectors to the Local Emergency Operations Centre (LEOC). Within the LEOC these requests could not be processed rapidly enough because Wollongong City Council had committed most of its' resources. In many cases the requests ended up being re-directed to the SES via our liaison officer in the LEOC.

When it became apparent that the LEOC was having difficulty responding to requests for equipment and services, the SES State Operations Centre began to directly source plant, equipment, and services for SES and RFS sectors. This was essential as work was often at a standstill because of lack of resources requested through other channels. Within hours of the change of procedure, large amounts of heavy plant and equipment were on site and this rapidly accelerated the clean-up operation.

The SES has direct access to the Natural Disaster Relief Arrangements (NDRA) funding. Using an Emergency Order system SES can access **any necessary resources** from public agencies or private companies without a complicated red-tape system. The authority to write orders is delegated to the three operational levels with the Service; SES Local Controllers, SES Division Controllers, and SES State Operations Centre Managers. This delegation structure, to ALL operational levels, creates great flexibility and SPEED.

The dollar value of the delegations increases from local up to state level. This provides a self regulating effect so that major resources which need coordination, cannot be committed locally. Because the system is very flexible and can be used freely it is closely scrutinised by both internal and external financial auditors.

Neither the NSW Police nor the NSW Fire Brigades have access to this system because it is linked to natural disasters. The SES as the combat agency for floods and storms, and the RFS as combat agency for bushfire have access for their respective threats. The emergency order system, properly managed, is a most important tool for the SES operations. The

Service has resource registers of major suppliers for frequently used goods and services. It is a standard condition that all suppliers on the system are contactable 24 hours a day. The most used and versatile resources register during events however, is the Yellow Pages.

The Wollongong flood demonstrated that despite civil engineering and urban planning intervention, there will be events which exceed the capability of affordable physical mitigation measures. There are no doubt, questions to be considered about the appropriateness of the risk levels that apply to development along watercourses in the Wollongong area. From an emergency management perspective, the sensitivity of the road network to local flooding is a critical issue. It is quite amazing that only one person drowned during the event. That fact by itself may suggest something about the severity of this event and extent to which people and property were exposed to it.

If a truly severe or extreme flood event does occur along the escarpment behind Wollongong, how will emergency service cope? Especially during the first 4-6 hours if access is cut in almost every directions. Floodplain management must continue to recognise the importance of emergency management and must accept that urban planning and design need to provide for the continued functioning of emergency services in extreme events. This consideration may mean designing some services such as critical roads, to a higher standard than might apply for day-to-day use.

In the Hawkesbury-Nepean valley where certain roads have been identified as critical for evacuation during floods, a design standard of 1:300 has been adopted for local flooding conditions. This precedent needs to be considered in many other areas of NSW. In floodplain management, emergency management needs to be a planned resource not a last resort.

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