Department of Primary Industries Parks Water and Environment Submission - Tasmanian Government Flood Review

**Department of Primary Industries Parks, Water and Environment (DPIPWE) role in formal structures.**

DPIPWE staff were actively involved with a range of response and recovery organisations including the Office of Security and Emergency Management (OSEM), Tasmania Fire Service, Tasmania State Emergency Services and Tasmania Police. DPIPWE staff returning from assisting Tasmania Police noted Tasmania Police had a well-planned and implemented induction and supervisory program and DPIPWE staff knew what was expected of them at all times.

Thereafter staff were seconded of the Flood Recovery Taskforce, the Flood Recovery Committee under the *Emergency Management Act 2006*, and Regional Recovery Committees.

**Department of Primary Industries Parks, Water and Environment (DPIPWE) role, responses, actions, activities and taken during the floods**

DPIPWE staff were involved in the June 2016 flood event response, however DPIPWE’s role has primary been in supporting the ongoing recovery program of the Flood Recovery Taskforce.

DPIPWE GIS specialists captured a wide range of data that assisted in identifying flood impacts and clusters of affected sites, so appropriate responses could be considered. This data also assisted with calculations of economic impacts.

Provision of land surveying services to establish accurate flood mapping over major river catchments and towns was one of DPIPWE’s important roles. The OSEM provided location information of required cross-sections in the form of ESRI Shapefiles that DPIPWE provided data for. DPIPWE surveyors were in many cases early on the scene and reported flood-affected landowners were very cooperative, indicating maximum flood levels on buildings, or other areas on their properties such as fences, debris lines in paddocks, wash lines, or in vegetation.

DPIPWE utilised Real Time Kinematic Satellite Navigation to enhance the precision of position data derived from orbiting satellites to increase the accuracy from metres to centimetres of flood levels and flood damage. In some areas no definitive evidence of flood levels was available due to the sudden flash flood nature of the event.

Biosecurity Tasmania (BT) was involved with early detection of systemic animal welfare issues and coordination of an appropriate response to those issues where required.

EPA Tasmania (DPIPWE staff) provided a livestock carcasses recovery program in the Mersey and the Ouse areas. This function had not been performed by the Government during previous floods thus there was no prior experience to drawn on. EPA Tasmania staff used their various levels of incident response training to establish an effective Incident Management Team, built on the Australasian Inter-Service Incident Management System (AIIMS). The carcass response ran over about three weeks, peaking in activity over day four to fourteen. The challenges included: access to resources given competing demands for contractors; accessing wet and still flooded properties to remove the carcasses; and a requirement to burn the carcasses on site. In the northern rivers area 181 cattle carcasses were disposed of and in the Ouse area 150 sheep carcasses were disposed of.

DPIPWE also developed a [web page](http://dpipwe.tas.gov.au/about-the-department/flood-information#AnimalWelfareDuringFloods) that provided information for the community about a wide range of flood related issues or concerns. The web page had a number of hotlines and fact sheets providing fast information and access to a number of services.

**Recovery actions, activities and tasks undertaken by DPIPWE.**

1. Transition to recovery

The floods provided a particular challenge as transition into recovery in some rural areas occurred several weeks after the initial event. Many people could not move onto the land to undertake recovery actions because of high water levels, damaged tracks, roads and bridges, and waterlogged and boggy paddocks. DPIPWE staff noted that this is a different situation compared to the recent fires they had been involved in, where the impacts are relatively immediate and can generally be dealt with in a short time after a fire has been extinguished.

A common situation noted by Divisions within DPIPWE was that the June floods created a significant draw on resources because of the unexpected nature of the event and because the response required evolved as the scale of the event unfolded.

1. Analysis of impacts

The Emergency Services GIS Section coordinated and undertook the development of a number of field and desktop based collection projects to support various sectors in the collection of Detailed Damage Assessment (DDA) data and other flood related data such as debris and dead livestock locations. Much of the data collected using these field and desktop based collection projects underpinned the development of the National Disaster Relief and Recover Arrangements (NDRRA) submissions.

DPIPWE provided technical support for the assessment of flood impacts on river systems; including property based impact assessments on private land and provided or facilitated specialist ecological, geomorphological, geotechnical expertise to DPIPWE staff and external clients in relation to specific sites and impact.

The Natural and Cultural Heritage Division (NCH) provided flood remediation assistance and advice to impacted landholders over an extended period, including property visits and telephone consultations. Distribution of fact sheets for landowners on topics concerning the floods were distributed by the Water Operations Branch and AgriGrowth Tasmania.

The Threatened Species Section of DPIPWE undertook desktop assessments to consider likely impacts on threatened species as a result of the floods and have identified sites to conduct survey work to determine impacts. Field work will occur at a selection of these sites in conjunction with scheduled surveys planned by the section.

NCH commissioned a specialist flood recovery consultancy to assess flood impacts on river system stability and the immediate riverine environment. The consultancy report is not yet finalised.

1. Primary Producer Support

DPIPWE has been responsible for administration of the ‘Category C Primary Producer Clean-Up Grants’ and the ‘Primary Producers Transport Subsidy’. As at 24 November 194 enterprises had applied for either a primary producer clean-up grant, transport subsidy or both.

Clean-up grants totalled $1,302,311.37 for 150 approved applications and transport subsidies totalled $127,464.95 for 47 approved applications. Ongoing assessment of applications is occurring.

Initial claims for the transport subsidy close on 30 November. Once initial claims have been made and approved, enterprises then have a further 6 months from the date of the first cartage they undertake to make further claims.

Utilisation of an existing Community Fund, The Rural Relief Fund, established prior to the flood event, was highly effective, as the fund was able to be scaled up immediately to assist with the flood recovery. The Fund had the capacity to distribute support efficiently. It also provided a conduit for some people affected by the floods into financial counselling to assist them to deal with the impacts of the event.

Members of the community often raised the matter of flood insurance with DPIPWE staff, who advised them they were not in a position to comment. While the issue of insurance is important to affected landowners it is not a matter for the Department to advise on.

1. Asset management

Government assets and infrastructure are maintained and generally built to withstand normal environmental conditions. Infrastructure managed by the Parks and Wildlife Service and the Water Management and Assessment Branch in several locations was not designed for a flood event of the magnitude experienced in June 2016.

*Parks and Wildlife Service*

The Parks and Wildlife Service had significant areas of land under its management impacted by the June floods. Utilisation of available staff resources occurred to undertake priority road and track clearing in order to reopen sites as quickly as possible. Larger asset repair work was prioritised and purchased through contractors. The speed and efficiency of this response was assisted by utilising the ‘Emergency Provisions’ in the Treasurer’s Exemption. In order to scale up project management capacity a significant amount of the project management associated with the insurance repair works was contracted to the private sector.

The Parks and Wildlife Service is focusing on asset reinstatement and where needed environmental repair. The lessons learnt will be applied to future design and site and planning. Government assets are self-insured through the Tasmanian Risk Management Fund. One limitation has been that insurance will only cover like-for-like replacement. This means in some cases where Parks had chosen to raise the height of replacement bridges or improve the structural resilience of a replacement structure, the additional cost has been found from alternate funding sources.

*Water Resources*

A key strategy within DPIPWE was to maintain a register of all reports about dam safety and maintaining a ‘report in’ procedure to check on staff whereabouts. Dam safety engineers undertook desktop assessments and made contact with dam owners supporting prioritisation of dams to be visited.

Streamlined dam repair recovery processes were developed by the Water Management Branch, allowing for the Department in cooperation with affected farmers to issue a Notice as an authority to conduct dam works, rather than following the normal process of applying for a dam permit to conduct works. Where necessary, safety reports and structural integrity assessments were still required before issuing of such Notices.

The principle that applied under the streamlined process was that dam works had to be ‘like for like’. If either a larger or completely new structure was required, then the normal permit application and assessment processes were required.  This measure has been effective, based on direct feedback from affected farmers with damaged dams.

DPIPWE’s Water Monitoring Section maintains and operates approximately 90 stream gauging stations throughout. The June floods destroyed or damaged 23 sites within the network. Reinstatement of damaged gauging stations will involve infrastructure being located above the recent flood levels and where possible further from the rivers. Works are planned for the Meander River station at Strathbridge, on the Rubicon River at the Tidal Limit station, on the Cam River at the Water Supply station and on the Pipers River at Underwood.

DPIPWE and the Bureau of Meteorology have entered into an Agreement for data and information sharing in relation to the operations of flood forecasting and warning services in Tasmania. The purpose of this Agreement is to document the existing informal arrangements between the Bureau and DPIPWE for the provision of water levels, river and other flows and rainfall data from a number of monitoring sites operated by DPIPWE and provided to the Bureau.

**Further Comments.**

Utilisation of an emergency response system such as the Australasian Inter-service Incident Management system (AIIMS) is important to ensure management of further natural disaster events occurs efficiently as possible. Other jurisdictions utilise AIIMS, which allows a functional management approach scaled to the needs of the incident. This model is currently successfully adopted for biosecurity responses and there are now a number of experienced staff within DPIPWE.  In addition, ensuring consistency in disaster operation terminology is important. It was noted that flood related terminology can differ between response Agencies. This was particularly highlighted in relation to measurement of river flows.

Investment in training of Departmental staff to ensure capacity in disaster planning, logistics and response operations is an important consideration to ensure that there is a depth of skill to draw from during a disaster event.

It was noted that the LISTmap’s provision of a ‘single-point-of-truth’ was invaluable for DPIPWE’s Emergency Services GIS staff, the OSEM and the Office of the Surveyor-General to communicate, view and upload / download and share datasets quickly. Consideration of the use of Remotely Piloted Aircraft (RPA) to capture flood water data could be made, especially in relation to recording of peak flows. RPA data is an efficient data collection method, providing rapid data capture and is accurate. Based on the experience of the June floods the Emergency Services GIS Section, in collaboration with State Emergency Service, initiated a RPA trial and collected flood imagery during the Huonville floods at the forecast flood peak.

DPIPWE staff indicated that clarification by organisations or Agencies directing field staff to collect different types of spatial data is important. Clear instruction assists in insuring that critical data is collected enabling Rapid Impact Assessments (RIA) to be conducted quickly, accurately and helps to inform efficient disaster response actions.

Some DPIPWE staff noted that they were emotionally affected by the obvious distress landowners were under, hearing often firsthand accounts of mass livestock loss, sudden night-flooding and extensive damage to fences, buildings, machinery and paddocks. Agencies such as DPIPWE need to plan to ensure appropriate support for staff involved in emergency response and recovery is available.