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1. Distribution and control

1.1. Preparation and authorisation

This Emergency Action plan has been prepared by the Senior Flood Mitigation Planning Officer, and has been authorised for issue to DNRME by the Manager City Assets.

1.2. Distribution lists

Tables 1 to 3 are distribution lists for notifications to updates to this EAP. Recipients of notifications are responsible for disseminating advices regarding any updates as appropriate to their position in accordance with the dam Standing Operating Procedures.

Table 1: Recipients of hard copies

<table>
<thead>
<tr>
<th>Copy #</th>
<th>Hard copy held by – position</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Executive Coordinator Stormwater Beaches and Waterways</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Senior Technical Officer Assets and Operations - Roads and Drainage Maintenance</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Executive Coordinator Disaster Management</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Dam Safety Regulator (DNRME)</td>
<td></td>
</tr>
</tbody>
</table>

Table 1: Recipients of notification to update USB

<table>
<thead>
<tr>
<th>Copy #</th>
<th>USB copy held by – position</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Executive Coordinator Disaster Management Unit</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Manager City Assets</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Executive Coordinator Stormwater Beaches and Waterways</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Coordinator Lakes and Waterways</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Senior Flood Mitigation Planning Officer</td>
<td></td>
</tr>
</tbody>
</table>

Table 3: List of recipients of notification iSPOT reference

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director of Transport &amp; Infrastructure/Local Disaster Coordinator</td>
<td></td>
</tr>
<tr>
<td>Executive Coordinator Disaster Management</td>
<td></td>
</tr>
<tr>
<td>Manager City Assets</td>
<td></td>
</tr>
<tr>
<td>Manager City Maintenance</td>
<td></td>
</tr>
<tr>
<td>Executive Coordinator Stormwater Beaches and Waterways</td>
<td></td>
</tr>
<tr>
<td>Coordinator Lakes and Waterways</td>
<td></td>
</tr>
<tr>
<td>Senior Technical Officer Assets and Operations - Roads and Drainage Maintenance</td>
<td></td>
</tr>
<tr>
<td>Executive Coordinator Parks and Landscape Maintenance</td>
<td></td>
</tr>
<tr>
<td>Executive Coordinator Construction</td>
<td></td>
</tr>
<tr>
<td>Supervisor Protective Services Operations</td>
<td></td>
</tr>
<tr>
<td>Senior Flood Mitigation Planning Officer</td>
<td></td>
</tr>
</tbody>
</table>
Table 4: Revision status

<table>
<thead>
<tr>
<th>Rev #</th>
<th>Date</th>
<th>Revision description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>September 2014</td>
<td>Original *</td>
</tr>
<tr>
<td>1</td>
<td>September 2015</td>
<td>General revision</td>
</tr>
<tr>
<td>2</td>
<td>29 December 2016</td>
<td>Contact List Update</td>
</tr>
<tr>
<td>3</td>
<td>September 2017</td>
<td>General revision</td>
</tr>
<tr>
<td>4</td>
<td>31 December 2018</td>
<td>General revision</td>
</tr>
<tr>
<td>5</td>
<td>30 September 2019</td>
<td>General revision</td>
</tr>
<tr>
<td>6</td>
<td>30 September 2020</td>
<td>Contact List update</td>
</tr>
</tbody>
</table>

Note: * Earlier EAPs have been replaced by this EAP. This EAP adopts a new format.

2. Introduction

2.1. Background

Tallebudgera Creek Dam is a Referable Dam as defined by the Queensland Water Supply (Safety and Reliability) Act 2008 and associated Guidelines.

An EAP is one of a number of dam management documents. Others include the dam Standing Operating Procedures, and the dam Detailed Operation and Maintenance Manual.

Where appropriate this EAP references the Tallebudgera Creek Dam Standing Operating Procedures (SOP).

2.2. Purpose

This Emergency Action Plan (EAP) is to inform key stakeholders of action to be undertaken when conditions, which may adversely impact on the dam, occur. Key stakeholders include residents downstream of the dam.

The EAP describes the coordination of necessary actions by the City of Gold Coast (City) and its officers to provide timely notification to Disaster Management groups and affected persons in the event of an Emergency Event at the Tallebudgera Creek Dam.

The EAP also provides guidance for managing developing circumstances, which may lead to an Emergency Event ultimately being declared at the dam e.g.:

- Heavy rain falling, which may result in water flowing over the dam spillway, if rain were to continue.
- Suspected movement of the dam embankment, which requires survey to confirm if movement has occurred before declaring an event.

In these circumstances, the EAP will be referenced without being invoked.

Further information regarding this EAP is available from the City of Gold Coast City Assets branch (Ph. 1300 694 222 and ask for Referable Dams officer).
2.3. Scope

The EAP details Emergency Events and Action Procedures for the following events:

- Large creek flows at the dam (triggers prefaced with ‘F’)
- Excessive or New Seepage (triggers prefaced with ‘S’)
- Movement of the Dam (triggers prefaced with ‘M’)
- Earthquake (triggers prefaced with ‘E’)
- Damage to Concrete or Embankment Sections (triggers prefaced with ‘D’)
- Terrorism/Security Threat (triggers prefaced with ‘T’).

2.3.1. Emergency events and action procedures

Procedures have been developed for various scenarios that may pose a risk to the dam.

Each procedure documents a series of events that trigger a decision or action.

Each procedure is laid out in a tabular format accompanied by a description to support the decision or required action.

2.3.2. Training

Training in the application of this EAP and a program of test and review exercises are guided by the Tallebudgera Creek Dam SOPs.

2.4. Limitation

This EAP only covers the situation at the Dam itself, although the effect of dam failure on downstream residents is included as inundation mapping.

This EAP does not deal with general flooding issues downstream of the dam. General flooding associated with Tallebudgera Creek, is managed by the City’s Tallebudgera Creek Flood Emergency Decision Support System and the City’s Local Disaster Management Plan.

2.5. Disaster management arrangements/emergency arrangements

Disasters and hazards

The Queensland Disaster Management Act 2003 provides the following description of disaster:

Meaning of Disaster

A disaster is a serious disruption in a community, caused by the impact of an event that requires a significant coordinated response by the State and other entities to help the community recover from the disruption.

Serious disruption means —

a) loss of human life, or illness or injury to humans; or

b) widespread or severe property loss or damage; or

c) widespread or severe damage to the environment
The Queensland Disaster Management Act 2003 states:
Part 1 Preliminary, Division 2 Objects
• s4A Guiding Principles
  (c) local governments should primarily be responsible for managing (disaster) events in their local
  government area;
Part 2 Disaster management groups and committees, Division 3 Local government disaster management
  groups
• s29 Establishment
  A local government must establish a Local Disaster Management Group (a local group) for the Local
  government’s area
• s30 Functions
  (c) to help the local government for its area to prepare a local disaster management plan
In the event of a disaster, decision-making authority for disaster management in the local government area
rests with the Chairperson of the Local Disaster Management Group. In the City of Gold Coast, the Mayor is
the Chairperson of the Local Disaster Management Group.
Local government is best situated to provide first-hand knowledge and understanding of social, economic,
infrastructure and environmental issues within their respective communities and are ideally placed to support
their community from a disaster management perspective. This is achieved through the Local Disaster
Management Group (LDMG) where Local Governments coordinate their response to a disaster.
When a disaster event occurs at Tallebudgera Creek Dam in a way which may adversely impact on a
community, the City will be lead agency in the coordination of the disaster event.
When an emergency or disaster event occurs at Tallebudgera Creek Dam, which may or may not adversely
impact on a community, Queensland Police Service or another emergency service; dependent on the
emergency, will be lead agency. The City of Gold Coast may, in this instance be required as a support
agency for the event.
Reference has been made to Manual 23 - Emergency Management Planning for Floods Affected by Dams,
published by Emergency Management Australia in the preparation of this EAP and the Local Disaster
Management Plan.

3. Definitions
The following definitions are used throughout this manual:
The Owner City of Gold Coast
Asset Custodian Manager City Assets
Dam Hazard Rising water levels, seepage, damage or other matters which may lead to
an Emergency Event
Dam Hazard Event An event arising from a Dam Hazard, which has not escalated to an
Emergency Event
Dam Hazard Manager Senior Flood Mitigation Planning Officer, City Assets, or alternate officer as
per Table 6 Roles and Responsibilities
Dam Inspector Designated Maintenance Officers
Emergency Event An escalated Dam Hazard Event where the Emergency Action Plan for the
dam is invoked
Emergency Event Report A report forwarded to the Dam Safety Regulator after an Emergency Event
3.1. Abbreviations and glossary of terms

The following abbreviations or Glossary of Terms applies when using this emergency Action Plan:

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>AHD</td>
<td>Australian Height Datum</td>
</tr>
<tr>
<td>City</td>
<td>City of Gold Coast</td>
</tr>
<tr>
<td>DHM</td>
<td>Dam Hazard Manager (see also DIM)</td>
</tr>
<tr>
<td>DIM</td>
<td>Dam Incident Manager (see also DHM)</td>
</tr>
<tr>
<td>DMU</td>
<td>Disaster Management Unit</td>
</tr>
<tr>
<td>DNRME</td>
<td>Department of Natural Resources, Mines and Energy</td>
</tr>
<tr>
<td>EAP</td>
<td>Emergency Action Plan</td>
</tr>
<tr>
<td>ECDM</td>
<td>Executive Coordinator Disaster Management or nominated relief</td>
</tr>
<tr>
<td>eDRMS/iSPOT</td>
<td>City’s enterprise document records management system</td>
</tr>
<tr>
<td>FIA</td>
<td>Failure Impact Assessment</td>
</tr>
<tr>
<td>LDCC</td>
<td>Local Disaster Coordination Centre</td>
</tr>
<tr>
<td>LDMG</td>
<td>Local Disaster Management Group</td>
</tr>
<tr>
<td>RL</td>
<td>Reduced Level – metres AHD</td>
</tr>
<tr>
<td>SOP</td>
<td>Standing Operating Procedures</td>
</tr>
</tbody>
</table>

3.2. LDMG activation levels

The following terms relate to levels of emergency services activation under Queensland disaster management arrangements.

As Events develop, LDC or Chair LDMG will determine the appropriate Activation Level, based on factors including (but not limited to):

- Conditions at the dam
- Conditions downstream unrelated to the dam e.g. tides and storm surges
- Weather forecasts

<table>
<thead>
<tr>
<th>Activation Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alert</td>
<td>A heightened level of vigilance and preparedness due to the possibility of an event in the area of responsibility. Some action may be required and the situation should be monitored by staff capable of assessing and preparing for the potential threat.</td>
</tr>
<tr>
<td>Lean Forward</td>
<td>An operational state prior to ‘stand up’ characterised by a heightened level of situational awareness of a disaster event (either current or impending) and a state of operational readiness. Disaster coordination centres are on stand-by; prepared but not activated</td>
</tr>
<tr>
<td>Stand Up</td>
<td>The operational state following ‘Lean Forward’ whereby resources are mobilised, personnel are activated and operational activities commenced. Disaster coordination centres are activated.</td>
</tr>
<tr>
<td>Stand Down</td>
<td>Transition from responding to an event back to normal core business and/or recovery operations. There is no longer a requirement to respond to the event and the threat is no longer present.</td>
</tr>
</tbody>
</table>
4. Communications and contact list

4.1. Communications

Communications at the dam site, which is not normally manned, consist of mobile phone.

In the event of no mobile phone services, personnel at the dam can utilise landline phones of local residents.

The Dam Hazard Manager, or his delegate, is responsible for reporting on rainfall, water levels and dam condition. The Dam Hazard Manager is responsible for identifying hazard and emergency situations.

The offices of the City of Gold Coast – City Assets, located at Nerang, can be contacted by telephone, and mobile phone.

Emergency Services and Bureau of Meteorology can be contacted by telephone.

4.2. Contact list

Table 5 contains a list of contact names and telephone numbers that can be used to contact each person during an emergency.

Table 2: Contact list

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
<th>Telephone</th>
<th>Mobile</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Department of Natural Resources, Mines and Energy (DNRME)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DNRME 24 hour hotline</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Director, Dam Safety</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| **City Assets** | | | |
| Manager, City Assets | | | |
| Executive Coordinator Stormwater Beaches and Waterways | | | |
| Coordinator Lakes and Waterways | | | |
| Senior Flood Mitigation Planning Officer | | | |

| **Disaster Management Unit** | | | |
| Executive Coordinator Disaster Management Unit | | | |
| Disaster Management Unit Duty Officer | | | |
| Coordinator Disaster Management | | | |
| Local Disaster Coordinator/Director Transport and Infrastructure | | | |

| **City Maintenance** | | | |
| Senior Technical Officer Assets and Operations Roads and | | | |
Position | Name | Telephone | Mobile | Email
--- | --- | --- | --- | ---
Drainage Maintenance | | | | |
City Security | | | | |
After-hours Protective Services Duty Officer | | | | |
Bureau of Meteorology | | | | |
Duty Meteorologist – Day-time | | | | |
Duty Meteorologist – Night-time | | | | |
Flood Warning and Tropical Cyclone Flood Warning | | | | |
SES | | | | |
Local Controller SES | | | | |
Emergency services | 000 | | | |

All Contact details shall be reviewed annually as per Tallebudgera Creek Dam Standing Operating Procedures.

A list of properties affected by dam break events is shown in Appendix F.

5. **Public notifications**

Arrangements for public notifications dealing with flooding and/or evacuations relating to the dam are included in the Public Information and Warnings Sub-Plan of the City Local Disaster Management Plan.

All forms of communications are utilised in times of emergency to ensure affected persons are informed of circumstances, which may affect them as they unfold.

Examples of communication channels include:

- Main-stream media (TV, radio)
- Social media (Twitter, Facebook)
- SMS to mobile phones in impacted areas
- Recorded messages to landline telephones in impacted areas

Text messages to mobile phones and recorded messages to landline telephones are sent via the Emergency Alert (EA) system ([www.emergencyalert.gov.au](http://www.emergencyalert.gov.au)) which is a national alerting system used for all emergencies. The timing of messages is dictated by circumstances at the time (including whether there are other higher priority emergencies, which are also utilising the EA system), takes into account conditions beyond the dam and is in accordance with the City Local Disaster Management Plan.

The EA system delivers messages to all phones (including unlisted numbers) in specific areas identified for particular emergencies. Access to unlisted numbers is managed by the EA system, and numbers are not accessible by any person.

The landline messages are spoken by a computer and there is no option to respond when the message is delivered. Pre-scripted EAs (refer below) have been developed for use during Dam Hazard Events. Prevailing conditions at the time of the emergency will dictate which alert is sent.
**Tallebudgera Creek Dam Emergency Action Plan**

**Process**

Transport and Infrastructure – Plan – Lakes and Waterways

---

<table>
<thead>
<tr>
<th>Landline Message</th>
<th>SMS Message</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DAM ALERT 1</strong> - (advice message – flood events)</td>
<td>City of Gold Coast managing flood event at Tallebudgera Creek Dam. Listen to radio for advice.</td>
</tr>
<tr>
<td>This is an advice from the City of Gold Coast managing a flood event at Tallebudgera Creek Dam. Listen to radio for updated information, or visit <a href="http://www.disaster.qld.gov.au">www.disaster.qld.gov.au</a>. For flood assistance contact the State Emergency Service on 1 3 2 500</td>
<td></td>
</tr>
</tbody>
</table>

| This is an advice from the City of Gold Coast managing //ISSUE// at Tallebudgera Creek Dam. Listen to radio for advice. | |

| **DAM ALERT 3** - (watch and act) | City of Gold Coast advise emergency at Tallebudgera Creek Dam. Prepare to move to higher ground. Listen to radio for advice. |
| This is a City of Gold Coast flood message. The Tallebudgera Creek Dam is expected to cause flooding in low-lying areas adjacent to Tallebudgera Creek. If you are in this area you should prepare to move to higher ground. For more information listen to local radio or visit [www.disaster.qld.gov.au](http://www.disaster.qld.gov.au). For flood assistance contact the State Emergency Service on 1 3 2 500 | |

| **DAM ALERT 4** - (emergency warning) | City of Gold Coast advise emergency at Tallebudgera Creek Dam. Evacuate immediately to higher ground. |
| Emergency emergency. This is an emergency Warning from the City of Gold Coast regarding an emergency at Tallebudgera Creek Dam affecting low-lying properties adjacent to Tallebudgera Creek. If you are in this area, evacuate to higher ground immediately. For more information listen to local radio, or visit [www.disaster.qld.gov.au](http://www.disaster.qld.gov.au). For flood assistance contact the State Emergency Service on 1 3 2 500 | |

Note: The proposed warnings are a guide only and should be amended based on the circumstances of the event.

6. **Roles and responsibilities**

6.1. **Schedule of roles and responsibilities**

The Schedule of Roles and Responsibilities nominates the position/title of each Officer responsible for given actions or roles under the EAP.

Contact details of relevant positions or agencies are included in Section 4.2: Contact List.
Figure 1: Notification chart

Table 3: Roles and responsibilities

<table>
<thead>
<tr>
<th>Position</th>
<th>Alternate position</th>
<th>Duty</th>
</tr>
</thead>
</table>
| Dam Hazard Manager              | Rostered Backup Dam Hazard Manager | Monitor weather and water levels during office-hours and after-hours during an event.  
Act as Dam Hazard Manager.  
Provide technical support to Disaster Management Centre.  
Liaise with Director DNRME Dam Safety.  
Submit Emergency Event Report to DNRME. |
| DMU Duty Officer                | Coordinator Disaster Management | Act as liaison between Dam Hazard Manager and LDMG for purposes of reporting conditions at dam.                                 |
| Duty Security Officer           | Alternate Duty Officer       | Monitor weather and water levels outside office-hours.  
Advise rostered Dam Hazard Manager when trigger occurs after-hours.                                                                 |

1 8:00am to 5:00pm Monday to Friday except public holidays

NOTES:
1. There is a distinction between a DAM HAZARD EVENT and an EMERGENCY EVENT. Reporting to DNRME is only required during an EMERGENCY EVENT.
2. Early notifications to Disaster Management Unit will act as warnings that an EMERGENCY EVENT may be imminent. DMU will use these early notifications as a communication tool for preplanning and for the decision to activate LDMG.
3. 'Other Sources' include but are not limited to City Natural Hazards team.
### General information about Tallebudgera Creek Dam

#### Table 4: Summary of dam features

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General</strong></td>
<td></td>
</tr>
<tr>
<td>Name of Dam</td>
<td>Tallebudgera Creek Dam</td>
</tr>
<tr>
<td>Location of dam</td>
<td>1186 Tallebudgera Creek Road, Tallebudgera (Latitude 28°10′39″S, longitude 153°21′42″E)</td>
</tr>
<tr>
<td>Owner of Dam</td>
<td>City of Gold Coast</td>
</tr>
<tr>
<td>Owner’s Representative</td>
<td>Manager City Assets</td>
</tr>
<tr>
<td>Designer</td>
<td>Dept of Local Government and City of Gold Coast</td>
</tr>
<tr>
<td>Construction Authority</td>
<td>City of Gold Coast</td>
</tr>
<tr>
<td>Construction Periods</td>
<td>Original construction 1949/50; Upgraded 2007</td>
</tr>
<tr>
<td>Safety Review dates</td>
<td>2018 FIA by SMEC</td>
</tr>
<tr>
<td><strong>Principal features</strong></td>
<td></td>
</tr>
<tr>
<td>Purpose</td>
<td>Originally constructed for water supply.</td>
</tr>
<tr>
<td></td>
<td>Currently Rural Fire Fighting water source.</td>
</tr>
<tr>
<td>Full Supply Level</td>
<td>RL 42.24 m</td>
</tr>
<tr>
<td>Storage at Full Supply Level</td>
<td>360 ML</td>
</tr>
<tr>
<td>Embankment Crest Elevation</td>
<td>RL 48.52 m</td>
</tr>
<tr>
<td>Embankment Height (above lowest toe)</td>
<td>Approximately 15 m</td>
</tr>
<tr>
<td>Embankment Length</td>
<td>Approximately 100 m</td>
</tr>
<tr>
<td>Foundation Elevation (lowest natural surface)</td>
<td>Approximately RL 33 m</td>
</tr>
<tr>
<td><strong>Embankment data</strong></td>
<td></td>
</tr>
<tr>
<td>Wall Type</td>
<td>Homogenous earthfill with concrete core wall and sheetpile cutoff</td>
</tr>
<tr>
<td>Crest Width</td>
<td>Approx 3.00 m (embankment); Approx 630 mm (concrete encased sheetpile)</td>
</tr>
<tr>
<td>Upstream Slope</td>
<td>2.5 H:1V</td>
</tr>
<tr>
<td>Downstream Slope</td>
<td>2.5 H:1V</td>
</tr>
<tr>
<td>Outlet</td>
<td>None</td>
</tr>
<tr>
<td>Regulator Description</td>
<td>None</td>
</tr>
<tr>
<td>Bulkhead</td>
<td>None</td>
</tr>
<tr>
<td>Riparian releases</td>
<td>N/A</td>
</tr>
</tbody>
</table>
### Description of emergency spillway

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency Spillway Type</td>
<td>Uncontrolled ogee and secondary embankment. Ogee reinforced with post-tensioned anchors installed during upgrade works.</td>
</tr>
<tr>
<td>Spillway Crest Levels</td>
<td>42.24 m original ogee and 45.59 m secondary spillway AHD</td>
</tr>
<tr>
<td>Spillway Crest Lengths</td>
<td>35 m (original ogee) and 15 m (secondary spillway)</td>
</tr>
<tr>
<td>Maximum Discharge Capacity</td>
<td>1,390 m$^3$/sec</td>
</tr>
<tr>
<td>Energy dissipation Method</td>
<td>Stilling basin (approx. 6.4 m long, max still water depth 1.1 m)</td>
</tr>
</tbody>
</table>

### Description of access – Note: no general public access to dam

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access Description</td>
<td>Gated with standard City “Parks 419” lock (key held by Senior Flood Mitigation Planning Officer)</td>
</tr>
<tr>
<td>Access Route</td>
<td>Access to main dam structure and southern abutment is from Tallebudgera Creek Road. Access to northern abutment is through private property at 17 Dove Road.</td>
</tr>
</tbody>
</table>

### Hazard rating

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Failure Impact Rating Category (FIRC)</td>
<td>2</td>
</tr>
<tr>
<td>Population at Risk</td>
<td>Approx. 130</td>
</tr>
<tr>
<td>Incremental Flood Hazard Category (IFHC)</td>
<td>High A (To be confirmed)</td>
</tr>
</tbody>
</table>

### 7.1. Access to Tallebudgera Creek Dam

Road access to the general Tallebudgera Creek Dam site (southern abutment and main embankment area) is via Tallebudgera Creek Road. Access to the northern abutment of the dam is from Dove Road via Dalton Road. Dalton Road leaves Tallebudgera Creek Road approximately 500 m downstream of the dam.

Tallebudgera Creek Road can be closed by major flooding, land slips and/or fallen trees.

Dalton Road has minor culverts which flood with approximately 0.5 m depth of flow over the dam spillway. Lake levels in the dam can rise quickly, causing the culverts to become impassable with little notice.

There is no road access to or from the dam when Tallebudgera Creek Road is closed.

There is no road access to or from Dove Road when the Dalton Road culverts are closed.

There is no general public access to the dam.
Figure 2: Location of Tallebudgera Creek Dam

Under NO CIRCUMSTANCES are lives to be endangered in attempting to cross flooded bridges or crossings in order to gain access to the dam or when undertaking inspections, taking monitoring readings for the dam, particularly when damage to the dam has been observed, or water levels are at high levels.
Figure 3: Aerial image of dam

- Access from Dove Road to north abutment
- Secondary spillway
- Ogee spillway
- Dam embankment
- Access from Tallebudgera Creek Road to south abutment
- Dalton Road culverts
- Dalton Road
- Tallebudgera Creek Road
8. Documentation and reporting

8.1. Documentation – Dam Hazard/Emergency Event Log (Event Log)

It is essential that activities and decisions undertaken during any Hazard or Emergency Event be duly recorded in chronological order in an Event Log.

The Event Log is to be maintained by the Dam Hazard Manager. Event Logs are to be scanned and indexed in eDRMS File No WF150/916/02.

Event Logs are to be supported by other documentation such as Dam Safety Inspection Sheets.

The Event Log shall comply with the requirements of Australasian Inter-Service Incident Management System (AIIMS) and contain the following information as a minimum.

- A description of the event.
- Time, date and description of any actions.
- Regular recordings of storage level.
- Regular recordings of rainfall.
- Instrumentation recordings.
- Description of any observed damage.
- Photographs and/or sketches.
- Details of communication which took place during the emergency.
- Any further comments considered necessary, such as lessons learned.

A sample Dam Event Log Form pro-forma is included in Appendix F. Alternate formats may be used.

Comments regarding the adequacy of the EAP and any recommendations or suggested changes to the EAP should also be included.

8.2. Reporting

During inundation at the dam, all deficiencies/events/failures observed during inspections and remedial actions required/undertaken are to be immediately communicated to the Senior Flood Mitigation Planning Officer.

An emergency event involving the dam is to be reported to the DNRME Dam Safety Regulator within 48 hours, and an Emergency Event Report is to be forwarded to DNRME within 30 days of completion of the event in accordance with the Tallebudgera Creek Dam – Dam Safety Condition Schedule (refer Tallebudgera Creek Dam SOP: Event Reporting).
9. Hazard and emergency events and actions

9.1. Flooding

As there are no facilities at the dam to control water flow (e.g. gates or valves), floods caused by heavy rain are not affected by actions at the dam.

Flooding scenarios considered in this EAP are restricted to those resulting from ‘dam breaks’.

Emergency action planning for flooding relating to scenarios not included in this EAP (e.g. widespread regional flooding) are covered by the City’s Tallebudgera Creek Flood Emergency Decision Support System and the City’s Local Disaster Management Plan.

9.2. Large Creek Flows

The flood telemetry system (station No 540366) at Tallebudgera Creek Dam is configured to send an SMS and/or email to the Senior Flood Mitigation Planning Officer, rostered Dam Hazard Managers and the Protective Services Duty Officer at pre-determined water levels. Contact phone numbers for each officer are listed on the Contact List - Table 5.

Water levels can be accessed from the Bureau of Meteorology (BOM) website at http://www.bom.gov.au/fwo/IDQ65388/IDQ65388.540359.tbi.shtml, the City Flood Alert PC at the Local Disaster Coordination Centre, or read directly from water level markers at the dam. Note that the BOM website water levels are delayed by approximately 20 minutes, and that the Flood Alert PC is not accessible to the public.

The City Assets branch of Transport and Infrastructure provides a framework of actions for City Maintenance and Disaster Management staff to follow when any trigger as defined in this EAP has occurred.

As the event continues, defined water levels within the dam trigger specific responses by relevant staff, such as undertaking inspections of the dam wall and associated hydraulic structures, recording data, communication to heighten alerts with relevant authorities, preparing for and recommending the evacuation of flood prone residents, monitoring weather forecasts/warnings and initiating urgent repairs as required.

Inspections are required as water levels within the dam reach certain heights (refer Table 8 for triggers) and whilst the dam water level is above the first trigger level. Inspections are to continue until inflows to the dam following the storm reduce such that the levels in the dam fall below the F-B trigger level. The frequency of inspections will vary according to the particulars of the rainfall event, and will be determined at the time by the Dam Hazard Manager.

Note that a number of action triggers will occur prior to an Emergency Event being declared.

During rainfall events, the rostered Dam Hazard Manager is to ensure compliance with the Dam EAP. City Assets Branch and City Maintenance Branch have pools of trained staff that can be called upon to conduct inspections.

When water levels recede as a storm passes, the Dam Hazard Manager is to reset the event to progressively lower levels and advise the DMU Duty Officer accordingly. The decision to stand down the response teams and to close the event is to be jointly made by the Dam Hazard Manager and the LDC, taking into account the rainfall pattern of the storm (intensity, duration and distribution), catchment hydrology and any other relevant factors.

Trigger levels relate to specific conditions at the dam. Note however that conditions at the dam are only one factor contributing to flood events downstream.
The following events and associated triggers have been defined.

<table>
<thead>
<tr>
<th>Trigger</th>
<th>Event</th>
<th>Dam discharge</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Left abutment spillway is activated</td>
<td>463 m³/s</td>
</tr>
<tr>
<td>2</td>
<td>Dam embankment approaching overtopping</td>
<td>1200 m³/s</td>
</tr>
<tr>
<td>3</td>
<td>Dam embankment overtopping potential</td>
<td>1400 m³/s</td>
</tr>
</tbody>
</table>

Figure 4: Relevant bridge and culvert location

Table 8: Large creek flows – triggers and actions ('F' triggers)

<table>
<thead>
<tr>
<th>Alert level</th>
<th>Triggers</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-A</td>
<td>&gt; 50mm rainfall in the catchment in 1 hour (refer Upper Tallebudgera AL and Tallebudgera Creek Dam AL at <a href="http://www.bom.gov.au/cgi-bin/wrap_fwo.pl?IDQ60335.html">http://www.bom.gov.au/cgi-bin/wrap_fwo.pl?IDQ60335.html</a>)</td>
<td>- DHM self-assesses rainfall data during office hours.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Security staff monitors rainfall data outside office hours and advise rostered DHM when trigger occurs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- DHM assumes control of event at dam, initiates an inspection of the dam as appropriate and records details on a Dam Event Log Form for this event.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- DHM liaises with DMU Duty Officer.</td>
</tr>
</tbody>
</table>
### Alert level | Triggers | Action
--- | --- | ---
F-B | Water level reaches R.L. 43.5 m (Depth of flow over spillway = 1.26 m, Dam discharge 100 m$^3$/s) | - DHM initiates an inspection of the dam as appropriate and records details on a/the Dam Event Log form for this event.
F-C | Water level reaches R.L. 44.5 m (Depth of flow over spillway = 2.26 m, Dam discharge 250 m$^3$/s) | - DHM liaises with DMU Duty Officer (or nominated relief contact) for conditions at dam to be relayed to appropriate emergency response agencies as required.

### Dam EMERGENCY EVENT* trigger levels

<table>
<thead>
<tr>
<th>Alert level</th>
<th>Triggers</th>
<th>Action</th>
</tr>
</thead>
</table>
| F-1 | Water level reaches R.L. 45.6 m (Depth of flow over spillway = 3.36 m, Dam discharge 463 m$^3$/s) | - DHM initiates an inspection of the dam as appropriate and records details on the Dam Event Log form for this event.  
- DHM liaises with DMU Duty Officer (or nominated relief contact) for conditions at dam to be relayed to appropriate emergency response agencies.  
- DHM contacts Coordinator Environmental Management Systems for an environmental assessment.  
- DHM informs the DNRME 24hr hotline. |
| F-2 | Water level reaches R.L. 48.0 m (Depth of flow over spillway = 5.76 m, Dam discharge 1,200 m$^3$/s) | - DHM initiates an inspection of the dam as appropriate and records details on the Dam Event Log form for this event.  
- DHM liaises with DMU Duty Officer (or nominated relief contact) for conditions at dam to be relayed to appropriate emergency response agencies.  
- DHM informs the DNRME 24hr hotline. |
| F-3 | Water level reaches R.L. 48.5 m (Depth of flow over spillway = 6.26 m, Dam discharge 1,400 m$^3$/s, overtopping of embankment imminent) | - DHM initiates an inspection of the dam as appropriate and records details on the Dam Event Log form for this event.  
- DHM liaises with DMU Duty Officer (or nominated relief contact) for conditions at dam to be relayed to appropriate emergency response agencies.  
- The DHM informs the DNRME 24hr hotline. |

### Dam POST-EVENT actions

- DHM and Local Disaster Coordinator to jointly determine when to stand down response staff, and to declare dam event closed.  
- DHM to advise City Protective Services of dam event closure.

* Dam Hazard Manager to advise DNRME of the Emergency Event within 48 hours of the event being declared, and also to submit an Emergency Event Report to DNRME within 30 days of the event being closed.
9.3. Excessive or new seepage occurrence

It is normal for earth dams to seep, however excessive or new seepage needs to be closely monitored. Monitoring seepage is part of routine dam maintenance. The following is for when unusual seepage volume, location or quality is observed.

9.3.1. Inspections

When seepage of an unusual pattern is observed, carry out inspection and log seepage details. Assess the quantity of seepage looking for signs of:

- increase in seepage quantity
- signs of cloudy seepage/increased turbidity.

Cloudy seepage is created by removal of fines and material from the dam embankment. Increasing seepage could be potentially linked to piping, caused by the removal of fines creating a conduit for water through the dam wall. The Dam Hazard Manager is to initiate constant monitoring from a safe distance.

9.3.2. Assessment

The Dam Hazard Manager is to assess the situation and take immediate action to investigate thoroughly. If substantial increase occurs in flow of seepage, Dam Hazard Manager to declare Emergency Event S-1.

9.3.3. Investigation

Dam Hazard Manager to undertake site investigation and proceed with appropriate actions such as:

- direction of remedial works
- engaging specialist Dam Safety Consultants
- elevate the event to Emergency Event S-2.

9.3.4. Potential dam failure

If a potential dam failure is suspected the Dam Hazard Manager is to immediately elevate the event to Emergency Event S-2.

9.3.5. Standing down

Once the event has been resolved, the Dam Hazard Manager is to stand down the event response team and close the event.

9.3.6. Reporting

Dam Hazard Manager to complete Event Log commencing from first advice from Field Staff.

If the Dam Hazard Event is escalated to an Emergency Event, the Dam Hazard Manager is to submit an Emergency Event Report to DNRME within 30 days of the event being closed.
### Table 5: Seepage – triggers and actions (‘S’ triggers)

<table>
<thead>
<tr>
<th>Alert level</th>
<th>Triggers</th>
<th>Action</th>
</tr>
</thead>
</table>
| S-A | Field staff become aware of seepage | • Field staff alert DHM  
• DHM assesses situation and either:  
  - Invokes Emergency Event Trigger S-1 immediately  
  - Activates further investigation to confirm seepage  
  - No further action |

**Dam HAZARD EVENT ALERT levels. Note: These DO NOT constitute an emergency event**

LDC or Chair LDMG to consider appropriate LDMG activation level at each alert.

| S-1 | Seepage occurring at unusual rate, or of increased turbidity | • DHM informs:  
  - DMU & LDMG (via DMU Duty Officer) for conditions at dam to be relayed to appropriate emergency response agencies.  
  - Director Transport and Infrastructure  
  - DNRME 24hr hotline.  
• DHM records details on Dam Event Log Form.  
• DHM engages Dam Safety Engineer as appropriate.  
• DHM contacts Coordinator Environmental Management Systems for an environmental assessment.  
• LDC or Chair LDMG directs that LDCC locates traffic control at Dalton Road and Tallebudgera Creek Road (at Gibsonville St and Rusty Court), and prepares to evacuate properties based on weather and advice by Dam Safety Engineers. |

| S-2 | Seepage considered likely to cause dam failure | • DHM informs:  
  - DMU & LDMG (via DMU Duty Officer) for conditions at dam to be relayed to appropriate emergency response agencies.  
  - Director Transport and Infrastructure  
  - DNRME 24hr hotline.  
• DHM records details on Dam Event Log Form.  
• DHM engages Dam Safety Engineer as appropriate.  
• LDC or Chair LDMG directs that LDCC initiates evacuations as appropriate given weather, Dam Safety Engineer’s advice and with reference to Dam Break inundation maps. |

**Dam POST-EVENT actions**

- DHM and Local Disaster Coordinator to jointly determine when to stand down response staff, and to declare dam event closed.  
- DHM to advise City Protective Services of dam event closure.

* Dam Hazard Manager to advise DNRME of the Emergency Event within 48 hours of the event being declared, and also to submit an Emergency Event Report to DNRME within 30 days of the event being closed.
9.4. Movement of dam

Movement is considered the general term associated with slide, slump, slip, scarp, bench. A series of movements may lead to the failure of the dam.

9.4.1. Inspection

During routine inspections when it appears that movement has occurred, the Dam Inspector is to record the inspection details in an Event Log. Assess the quantity of movement looking for signs of:
- foundation movement
- overly steep grades
- local settlement
- cracking and slumping or slipping.

The Dam Inspector is to immediately notify the Dam Hazard Manager and resume constant monitoring from a safe distance until stood down by the Dam Hazard Manager.

9.4.2. Assessment

Dam Hazard Manager to assess the situation and take immediate action to investigate thoroughly. If warranted, Dam Hazard Manager to declare Emergency Event M-1.

9.4.3. Investigations

Dam Hazard Manager to undertake site investigation and proceed with appropriate actions such as:
- direction of remedial works
- engaging specialist Dam Safety Consultants
- elevate the event to Emergency Event M-2.

9.4.4. Potential dam failure

If a potential dam failure is suspected the Dam Hazard Manager is to immediately elevate the Event to Emergency Event M-2.

9.4.5. Standing down

Once the event has been resolved, the Dam Hazard Manager is to stand down the event team and close the event.

9.4.6. Reporting

Dam Hazard Manager to complete Event Log commencing from first advice from Field Staff.

If the Dam Hazard Event is escalated to an Emergency Event, the Dam Hazard Manager is to submit an Emergency Event Report to DNRME within 30 days of the event being closed.
### Table 6: Movement of dam – triggers and actions (‘M’ triggers)

<table>
<thead>
<tr>
<th>Alert level</th>
<th>Triggers Note: Where triggers for other event scenarios occur simultaneously, the greater trigger is to control actions.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam HAZARD EVENT ALERT levels. Note: These DO NOT constitute an emergency event LDC or Chair LDMG to consider appropriate LDMG activation level at each alert.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| M-A | Field staff become aware of apparent movement | • Field staff alert DHM  
• DHM assesses situation and either:  
  - Invokes Emergency Event M-1 immediately  
  - Activates further investigation to confirm movement  
  - No further action |
| Dam EMERGENCY EVENT* trigger levels LDC or Chair LDMG to consider appropriate LDMG activation level at each alert | | |
| M-1 | Confirmed movement of part or all of dam embankment | • DHM informs:  
  - DMU & LDMG (via DMU Duty Officer) for conditions at dam to be relayed to appropriate emergency response agencies.  
  - Director Transport and Infrastructure  
  - DNRME 24hr hotline.  
• DHM records details on Dam Event Log Form.  
• DHM engages Dam Safety Engineer as appropriate.  
• DHM contacts Coordinator Environmental Management Systems for an environmental assessment.  
• LDC or Chair LDMG directs that LDCC considers closing Dalton Road and Tallebudgera Creek Road (at Gibsonville Street and Rusty Court)< and prepares to evacuate properties – based on weather and advice by Dam Safety Engineer. |
| M-2 | Dam Safety Engineer or Dam Hazard Manager considers dam to be at risk of collapse | • DHM informs:  
  - DMU & LDMG (via DMU Duty Officer) for conditions at dam to be relayed to appropriate emergency response agencies.  
  - Director Transport and Infrastructure  
  - DNRME 24hr hotline.  
• DHM records details on Dam Event Log Form.  
• DHM engages Dam Safety Engineer as appropriate.  
• LDC or Chair LDMG directs that LDCC initiates evacuations as appropriate given weather, Dam Safety Engineer’s advice and reference to Dam Break inundation maps. |
| Dam POST-EVENT actions | | |
| | • DHM and Local Disaster Coordinator to jointly determine when to stand down response staff, and to declare dam event closed.  
• DHM to advise City Protective Services of dam event closure. |

* Dam Hazard Manager to advise DNRME of the Emergency Event within 48 hours of the event being declared, and also to submit an Emergency Event Report to DNRME within 30 days of the event being closed.
9.5. Earthquake

In the event of an earthquake, concern centres on the structural stability of the dam. Movement could occur during the earthquake resulting in or leading to failure of the dam.

9.5.1. Inspections

The Dam Hazard Manager is to determine if the earthquake has the potential to damage the dam, and if so, to initiate an inspection.

Field staff to carry out visual inspection searching for damage. Assess the quantity of damage looking for signs of:

- foundation movement
- local settlement
- longitudinal or traverse cracking
- misalignment
- slumping or slipping.

Dam Hazard Manager to determine and initiate appropriate monitoring regime.

9.5.2. Assessment

Dam Hazard Manager to assess the situation and take immediate action to investigate thoroughly. If warranted, Dam Hazard Manager to declare Emergency Event E-1.

9.5.3. Investigations

Dam Hazard Manager to undertake site investigation and proceed with appropriate actions such as:

- direction of remedial works
- engaging specialist Dam Safety Consultants
- elevate the event to Emergency Event E-2.

9.5.4. Potential dam failure

If a potential dam failure is suspected the Dam Hazard Manager is to immediately elevate the Event to Emergency Event E-2.

9.5.5. Standing down

Once the event has been resolved, the Dam Hazard Manager is to stand down the event response team and close the event.

9.5.6. Reporting

Dam Hazard Manager to complete Event Log commencing from first advice from Field Staff.

If the Dam Hazard Event is escalated to an Emergency Event, the Dam Hazard Manager is to submit an Emergency Event Report to DNRME within 30 days of the event being closed.
Table 7: Earthquake – triggers and actions (E’ triggers)

<table>
<thead>
<tr>
<th>Alert level</th>
<th>Triggers Note: Where triggers for other event scenarios occur simultaneously, the greater trigger is to control actions.</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-A</td>
<td>The effect of an earthquake is felt within the Gold Coast</td>
<td>DHM determines whether a dam inspection should be undertaken and initiates inspection of dam, if considered necessary.</td>
</tr>
</tbody>
</table>

**Dam HAZARD EVENT ALERT levels. Note: These DO NOT constitute an emergency event**
LDC or Chair LDMG to consider appropriate LDMG activation level at each alert.

| E-1         | Damage to Dam confirmed                                                                      | • DHM informs:  
|             |                                                                                                | - DMU & LDMG (via DMU Duty Officer) for conditions at dam to be relayed to appropriate emergency response agencies.  
|             |                                                                                                | - Director Transport and Infrastructure  
|             |                                                                                                | - DNRME 24hr hotline.  
| E-2         | Dam Safety Engineer or DHM considers dam to be at risk of collapse                           | • DHM informs:  
|             |                                                                                                | - DMU & LDMG (via DMU Duty Officer) for conditions at dam to be relayed to appropriate emergency response agencies.  
|             |                                                                                                | - Director Transport and Infrastructure  
|             |                                                                                                | - DNRME 24hr hotline.  

**Dam EMERGENCY EVENT* trigger levels**
LDC or Chair LDMG to consider appropriate LDMG activation level at each alert.

| E-1         | Damage to Dam confirmed                                                                      | • DHM informs:  
|             |                                                                                                | - DMU & LDMG (via DMU Duty Officer) for conditions at dam to be relayed to appropriate emergency response agencies.  
|             |                                                                                                | - Director Transport and Infrastructure  
|             |                                                                                                | - DNRME 24hr hotline.  
| E-2         | Dam Safety Engineer or DHM considers dam to be at risk of collapse                           | • DHM records details on Dam Event Log Form.  
|             |                                                                                                | • DHM engages Dam Safety Engineer as appropriate.  
|             |                                                                                                | • DHM contacts Coordinator Environmental Management Systems for an environmental assessment.  
|             |                                                                                                | • LDC or Chair LDMG directs that LDCC considers closing Dalton Road and Tallebudgera Creek Road (at Gibsonville Street and Rusty Court), and prepares to evacuate properties – based on weather and advice by Dam Safety Engineer.  

**Dam POST-EVENT actions**

| • DHM and Local Disaster Coordinator to jointly determine when to stand down response staff, and to declare dam event closed.  
| • DHM to advise City Protective Services of dam event closure.  

* Dam Hazard Manager to advise DNRME of the Emergency Event within 48 hours of the event being declared, and also to submit an Emergency Event Report to DNRME within 30 days of the event being closed.
9.6. Damage to the dam

Damage is caused by a foreign source creating a failure or possible future point of failure or possible weakness in the integrity of the dam.

9.6.1. Inspection

During routine inspection when damage is observed, the Dam Inspector is to log details of damage caused to the dam. Assess the damage looking for signs of:

- foundation movement
- overly steep slopes
- local settlement
- longitudinal or traverse cracking
- misalignment
- vertical displacement
- slumping or slipping.

Immediately notify the Dam Hazard Manager and resume constant monitoring from a safe distance until stood down by the Dam Hazard Manager.

9.6.2. Assessment

Dam Hazard Manager to assess the situation and take immediate action to investigate thoroughly. If structural damage has been sustained, Dam Hazard Manager to declare Emergency Event E-1.

9.6.3. Investigations

Dam Hazard Manager to undertake site investigation and proceed with appropriate actions such as:

- direction of remedial works
- engaging specialist Dam Safety Consultants
- elevate the event to Emergency Event D-2.

9.6.4. Potential dam failure

If a potential dam failure is suspected the Dam Hazard Manager is to immediately elevate the Event to Emergency Event D-2.

9.6.5. Standing down

Once the event has been resolved, the Dam Hazard Manager is to stand down the event team and close the event.

9.6.6. Reporting

Dam Hazard Manager to complete Event Log commencing from first advice from Field Staff.

If the Dam Hazard Event is escalated to an Emergency Event, the Dam Hazard Manager is to submit an Emergency Event Report to DNRME within 30 days of the event being closed.
Table 8: Damage to dam – triggers and actions (*D* triggers)

<table>
<thead>
<tr>
<th>Alert level</th>
<th>Triggers</th>
<th>Action</th>
</tr>
</thead>
</table>
| **D-A**     | Field Staff becomes aware of damage | - Field staff alerts DHM.  
- DHM assesses report and either:  
  - Invokes Emergency Event Trigger D-1 immediately  
  - Activates further investigation  
- No further action required |
| **D-1**     | Damage to dam which compromises dam integrity is confirmed | - DHM informs:  
  - DMU & LDMG (via DMU Duty Officer) for conditions at dam to be relayed to appropriate emergency response agencies.  
  - Director Transport and Infrastructure  
  - DNRME 24hr hotline.  
- DHM records details on Dam Event Log Form.  
- DHM engages Dam Safety Engineer as appropriate.  
- DHM contacts Coordinator Environmental Management Systems for an environmental assessment.  
- LDC or Chair LDMG directs that LDCC locates traffic control at Dalton Road and Tallebudgera Creek Road (at Gibsonville St and Rusty Court), and prepares to evacuate properties based on weather and advice by Dam Safety Engineers. |
| **D-2**     | Dam is compromised to the point when community safety is at risk | - DHM informs:  
  - DMU & LDMG (via DMU Duty Officer) for conditions at dam to be relayed to appropriate emergency response agencies.  
  - Director Transport and Infrastructure  
  - DNRME 24hr hotline.  
- DHM records details on Dam Event Log Form.  
- DHM engages Dam Safety Engineer as appropriate.  
- LDC or Chair LDMG directs that LDCC considers closing Dalton Road and Tallebudgera Creek Road (at Gibsonville Street and Rusty Court), and considers evacuating properties depending on prevailing weather conditions, Dam Safety Engineer’s advice and with reference to Dam Break inundation maps. |

**Dam POST-EVENT actions**

- DHM and Local Disaster Coordinator to jointly determine when to stand down response staff, and to declare dam event closed.  
- DHM to advise City Protective Services of dam event closure.
9.7. Terrorism/security threat to the dam
An act of terrorism occurs at the dam, or there is a suspected security threat.

9.7.1. Inspection
When an act of terrorism occurs, or is suspected to have occurred, details are to be logged.
The Dam Hazard Manager is to be immediately notified.

9.7.2. Assessment
Once it has been confirmed that there has been an act of terrorism, or suspected terrorism, the Dam Hazard Manager is to declare Emergency Event T-1.

9.7.3. Investigations
Dam Hazard Manager to be available as required to assist appropriate authorities.

9.7.4. Potential dam failure
If a potential dam failure is suspected the Dam Hazard Manager is to immediately declare Emergency Event T-2.

9.7.5. Standing down
Once the event has been resolved, the Dam Hazard Manager is to stand down the event team and close the event.

9.7.6. Reporting
Dam Hazard Manager to complete Event Log commencing from first advice from Field Staff.

If the Dam Hazard Event is escalated to an Emergency Event, the Dam Hazard Manager is to submit an Emergency Event Report to DNRME within 30 days of event.

Table 9: Terrorism/security threat to dam – triggers and actions ('T' triggers)

<table>
<thead>
<tr>
<th>Alert level</th>
<th>Triggers</th>
<th>Action</th>
</tr>
</thead>
</table>
| T-A         | Field Staff suspects actual or suspected terrorist act or security threat at dam | • Field staff alerts DHM.  
• DHM assesses report and either:  
  - Invokes Emergency Event Trigger T-1 or T-2 immediately  
  - Activates further investigation  
  - No further action required |

Note: Where triggers for other event scenarios occur simultaneously, the greater trigger is to control actions.
### Alert level

<table>
<thead>
<tr>
<th>Alert level</th>
<th>Triggers</th>
<th>Action</th>
</tr>
</thead>
</table>
| T-1         | Threat to dam which may compromise dam integrity is confirmed | - DHM liaises with DMU Duty Officer (or nominated relief contact) for conditions at dam to be relayed to appropriate emergency response agencies.  
- DHM informs:  
  - Police (000) for terrorism matters  
  - National Security Hotline (1800 123 400) for suspicious activities  
  - DNRME 24 hr hotline  
- DHM records details on Dam Event Log Form.  
- DHM engages Dam Safety Engineer as appropriate.  
- DHM contacts Coordinator Environmental Management Systems for an environmental assessment.  
- LDC or Chair LDMG directs that LDCC considers closing Dalton Road and Tallebudgera Creek Road (at Gibsonville Street and Rusty Court), and considers evacuating properties depending on conditions at the dam, Dam Safety Engineer’s advice and with reference to Dam Break inundation maps. |
| T-2         | Threat to dam is such that community safety is at risk | - DHM liaises with DMU Duty Officer (or nominated relief contact) for conditions at dam to be relayed to appropriate emergency response agencies.  
- DHM notifies:  
  - Police (000) for terrorism matters  
  - National Security Hotline (1800 123 400) for suspicious activities  
  - DNRME 24 hr hotline  
- DHM records details on Dam Event Log Form.  
- DHM engages Dam Safety Engineer as appropriate.  
- LDC or Chair LDMG directs that LDCC considers closing Dalton Road and Tallebudgera Creek Road (at Gibsonville Street and Rusty Court), and considers evacuating properties depending on conditions at the dam, Dam Safety Engineer’s advice and with reference to Dam Break inundation maps. |

### Dam POST-EVENT actions

- DHM and Local Disaster Coordinator to jointly determine when to stand down response staff, and to declare dam event closed.  
- DHM to advise City Protective Services of dam event closure.

* Dam Hazard Manager to advise DNRME of the Emergency Event within 48 hours of the event being declared, and also to submit an Emergency Event Report to DNRME within 30 days of the event being closed.
APPENDIX A:

DAM DESIGN DRAWINGS
Drawing 2: Original Dam Details
Drawing 3: Dam Ogee Spillway
APPENDIX B:

PHOTOGRAPHS
Photo 1: Entry

Photo 2: Upstream general layout
Photo 3: Hydrostatic probe detail

Photo 4: Downstream general layout
Photo 5: Downstream embankment detail 1

Photo 6: Downstream embankment detail 2
Photo 7: Downstream seepage collection outfall

Photo 8: Spillway detail
Photo 9: Downstream spillway detail

Photo 10: Road crossing1 – Dalton Road
Tallebudgera Creek Dam Emergency Action Plan

Photo 11: Road crossing 2 – Tallebudgera Creek Road near Rusty Court (driving to dam)

Photo 12: Road crossing 3 – Tallebudgera Creek Road near Gibsonville Street (driving to dam)
APPENDIX C:

SPILLWAY RATING CURVE
### Tallebudgera Creek Dam Emergency Action Plan

**Process**

**Transport and Infrastructure – Plan – Lakes and Waterways**

<table>
<thead>
<tr>
<th>Spillway Head (m)</th>
<th>Total Discharge (m³/s)</th>
<th>Ogee Discharge (m³/s)</th>
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#### Tallebudgera Creek Dam Spillway Discharge Curve

Spillway discharge curve derived from Table 7 of the ‘Report for Tallebudgera Creek Dam Upgrade – Detailed Design Report (July 2007) prepared by G.H.D.’
APPENDIX D:

SPILLWAY DEPTH / RL COMPARISON
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<th>Bureau of Meteorology website reading (Depth over spillway in metres)</th>
<th>RL (m AHD)</th>
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APPENDIX E:

DAM EVENT LOG FORM
## Tallebudgera Creek Dam Event Log Form

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<th>DATE</th>
<th>TIME</th>
<th>WATER LEVEL (mL)</th>
<th>Depth above spillway</th>
<th>Rainfall since last observation</th>
<th>Weather Outlook</th>
<th>EMERGENCY TRIGGER</th>
<th>Upstream Embankment Condition</th>
<th>Downstream Embankment Condition</th>
<th>Crest Condition</th>
<th>Spillway Condition</th>
<th>Inspection carried out</th>
<th>ACTION TAKEN</th>
<th>Contacted</th>
<th>COMMENTS</th>
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**Inspector/Incident Manager**

**Signature**

---

**Contacts**

- Senior Flood Mitigation Planning Officer
- Water Resource Utilisation Officer
- Coordinator Lakes and Waterways
- Senior Technical Officer Flood Forecast and Operations
- CVSC Secretary

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[Source file: #35946220 v18]
APPENDIX F:

INUNDATION MAPS AND PROPERTY LISTS

- Inundation data sourced from Failure Impact Assessment Report (2012) prepared by GHD. Care should be exercised when interpreting this data.
- The data is based on computer models of specific scenarios. There is no guarantee that any future rainfall events will result in inundation exactly as shown.
- This data is provided for information purposes only to assist pre-planning for possible future scenarios.
- Properties shown on these maps (and listed in the tables following) have been identified as being incrementally inundated by a dam break during a specific storm in accordance with the Guidelines for Failure Impact Assessment of Water Dams.
Tallebudgera Creek Dam Emergency Action Plan

Process

Transport and Infrastructure – Plan – Lakes and Waterways

Figure 6.3

Incremental Impact
AEP 1 in 50 Event

Gold Coast City Council
Tallebudgera Creek Dam
Floods Impact Assessment

GHD

CITY OF GOLDCOAST

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