



# Sub Plan 12

## Dam Failure

## **ADOPTION BY COUNCIL**

The North Burnett Disaster Management Sub Plan 12 – Dam Failure was adopted by the North Burnett Local Disaster Management Group at the LDMG in Gayndah on 29 June 2023.

Version: 2.1

## **COPIES OF SUB PLAN 12 – DAM FAILURE**

Copies of Sub Plan 12 – Dam Failure are available free of charge electronically on council's website [www.northburnett.qld.gov.au](http://www.northburnett.qld.gov.au) or can be viewed at any Customer Service Centre.

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# **SUB PLAN 12 – DAM FAILURE**

## **PURPOSE OF THIS SUB PLAN**

The purpose of this sub plan is to summarise the arrangements that apply for the safety of people downstream from major dams throughout the region. Note this Sub Plan provides only an overview and summary of these arrangements and should be read in conjunction with the relevant Dam Emergency Action Plans.

## **MAINTENANCE OF THIS SUB PLAN**

The Local Disaster Coordinator is responsible for this Sub Plan. Changes to this Sub Plan require the endorsement of the Local Disaster Management Group (LDMG) and the approval of the Local Disaster Coordinator (LDC). This Sub Plan shall be exercised and reviewed triennially.

## RESPONSIBILITIES DURING A DAM EMERGENCY EVENT

The dam owner/operator is responsible for providing warnings to downstream residents during dam safety events. Details of the triggers and warnings are specified in each Dam Emergency Action Plan.

The LDMG is responsible for assisting in the provision of warnings as required and coordinating evacuation and community responses to any threat.

## DAM EMERGENCY ACTION PLANS

Dams which put lives at risk if they were to fail are defined as Referable Dams. The owner of a referable dam must have a plan which documents management responsibilities and procedures based on possible dam failure events. These are called Dam Emergency Action Plans (EAP) and are maintained by the Dam owner/operator. North Burnett Regional Council holds copies of the following Dam EAP's.

Name	Location	Owner/Operator	Document ID
Boondooma Dam	Okeden Road, Proston (South Burnett)	Sunwater	179849
Bjelke-Petersen Dam	Haager Drive, Moffatdale	Sunwater	868344
Cania Dam	Shamrock Road, Cania	Sunwater	179844
Paradise Dam	Paradise Dam Road, Coringa	Sunwater	179653
Perry River Dam	Swindon Road, Mt Perry	Evolution Mining (Mt Rawdon Gold Mine)	729794
Wuruma Dam	Wuruma Dam Road, Wuruma	Sunwater	179670

Other smaller dams in the region may pose risks to individual landowners but are not classified as referable dams. Dams which are not referable are not considered further in this plan.

The *Water Supply (Safety and Reliability) Act 2008 Section 352H* requires these EAP's identify each dam hazard, and for each of those hazard types (eg, flood operations, chemical spill):

1. Identify the area likely to be affected by a dam hazard event or emergency event arising from the dam hazard; and
2. Identify each circumstance that indicates a material increase in the likelihood of the dam hazard event or emergency event happening; and
3. State when and how the owner of the dam plans to warn persons who may be harmed, or whose property may be harmed by an event caused by the dam hazard, if one happens, and/or there is a material increase in the likelihood of an occurrence, including the order of priority in which the persons or categories of persons are to be warned; and
4. State when and how the owner plans to notify the relevant entities for the dam, if a dam hazard event or emergency event happens or, there is a material increase in the likelihood of such an occurrence, including the order of priority in which the relevant entities are to be notified; and
5. State the actions the owner of the dam plans to take in response to a dam hazard event or emergency event.

The EAP and any amendments must be assessed by Council for consistency with the North Burnett Disaster Management Plan.

## RESPONDING TO A DAM EMERGENCY EVENT

Dam EAPs identify what actions will be taken to an escalating threat. This includes:

- Details about the dam that are relevant to a dam hazard
- Identification of circumstances that indicates a material increase in the likelihood of a dam hazard event or emergency event
- Triggers for activation of a tiered response to a dam hazard event or emergency event
- Roles and responsibilities in responding to a dam hazard event or emergency event
- Notification, warning, and communication protocols
- Inspection, monitoring, and reporting protocols during emergencies

Should activation of the EAP take place, the LDMG Executive, DDMG Executive and Dam owner/operator will hold regular meetings to review the EAP and coordinate actions accordingly. Should the EAP be activated due to a possible flood event, the Bureau of Meteorology may also attend these activation meetings depending on the level of risk. Should the plan be expected to reach Lean Forward level the LDMG will activate and the Local Disaster Coordination Centre will be operational.

It should be noted that the EAP's specify the dam owner/operators actions in response to a dam emergency event. While the dam owner/operators are responsible for providing warnings to immediate downstream communities and for keeping the LDMG informed on issues relating to the safety of downstream residents, they are not responsible for coordinating the community response to any dam failure. This responsibility remains with the LDMG. The LDMG should ensure that they receive timely and relevant information on dam emergency issues in order to coordinate community response.

## BOONDOOMA DAM

### DAM INFORMATION

Boondooma Dam is located on the Boyne River at AMTD 86.7km approximately 50 km North-West of Wondai in the South Burnett Region. The dam is situated where Sandy Creek enters the Boyne River. It was constructed in 1983 to supply water to the Tarong Power Station and for irrigation. It has a capacity of 204,200 ML.

### POPULATION AT RISK

The estimated PAR is 8,607 for a flood related dam failure and 3 for a Sunny Day Failure as identified in the EAP. Approximately 90% of the PAR identified for flood failure of Boondooma is located downstream of Paradise Dam, more than 200km downstream of Boondooma Dam.

Further information regarding Boondooma Dam responsibilities and procedures can be found in the Emergency Action Plan (Document ID# 179849)



## **BJELKE-PETERSEN DAM**

### **DAM INFORMATION**

Bjelke-Petersen Dam is located on Barker Creek at AMTD 1.3km approximately 67km South-West of Gympie and 8km South of Murgon in the South Burnett Region; just upstream of the confluence with Barambah Creek. It was constructed in 1988 for assured supply of water for the Barker-Barambah irrigation project and to supplement the town water supply for townships of Murgon, Wondai, Byee and Cherbourg. It has a capacity of 134,900ML.

### **POPULATION AT RISK**

The estimated PAR is 1239 for a flood related dam failure and 229 for a Sunny Day Failure as identified in the EAP.

Further information regarding Bjelke-Petersen Dam responsibilities and procedures can be found in the Emergency Action Plan (Document ID# 868344).

## **CANIA DAM**

### **DAM INFORMATION**

Cania Dam is situated on the Three Moon Creek at AMTD 110.1 km. It is an earth and rockfill embankment dam located approximately 40 km north west of Monto. The dam was completed in 1982 mainly to supply irrigation water.

### **POPULATION AT RISK**

The estimated PAR is 522 for a flood related dam failure and 99 for a Sunny Day Failure as identified in the EAP.

Further information regarding Cania Dam responsibilities and procedures can be found in the Emergency Action Plan (Document ID# 179844)

## **PARADISE DAM**

### **DAM INFORMATION**

Paradise Dam is situated on the Burnett River at AMTD 131.4 km. It is located approximately 40km southwest of Childers within the North Burnett Region. The main dam consists of roller compacted concrete spillway & abutments and zoned earth embankment on the right bank ridge. It was completed in 2005 and is used for irrigation and recreational purposes. It has a storage capacity of 300,000 mega litres. The dam is owned by Burnett Water Pty Ltd (a subsidiary of Sunwater) and is operated by Sunwater.

### **POPULATION AT RISK**

The estimated Population at Risk (PAR) is 4,434 (1 in 270 AEP event) for a flood related dam failure and 16 for a Sunny Day Failure.

Further information regarding Paradise Dam responsibilities and procedures can be found in the Emergency Action Plan (Document ID# 179653).



## PERRY RIVER DAM

### DAM INFORMATION

Perry River Dam is situated on the Perry River located approximately 14km south east of the Mt Perry township. The dam is a roller compacted concrete gravity structure with an uncontrolled primary spillway and abutment slabs. It was completed in February 1996 and is used for raw water storage to service the gold mining operations. It has a storage capacity of 1050 mega litres. The dam is owned by Newcrest Mining Ltd and is operated by the Mt Rawdon Gold Mine.

### POPULATION AT RISK

The estimated PAR is 3 for a flood related dam failure and 0 for a Sunny Day Failure.

Further information regarding Perry River Dam responsibilities and procedures can be found in the Emergency Action Plan (Document ID# 729794)

## WURUMA DAM

### DAM INFORMATION

Wuruma Dam is a mass concrete gravity dam located on the Nogo River at AMTD 23.0 km. The Nogo River is a tributary of the Burnett River in north west of the basin. The dam is situated approximately 48 km north west of Eidsvold and it was completed to its full height in 1968. The dam is used for irrigation, flood mitigation and town water supply of surrounding areas.

### POPULATION AT RISK

The estimated PAR is 330 for a flood related dam failure and 20 for a Sunny Day Failure as identified in the EAP.

Further information regarding Wuruma Dam responsibilities and procedures can be found in the Emergency Action Plan (Document ID# 179670)