Department of Sustainability and Environment



# DAM SAFETY EMERGENCY PLAN

Location of Dam	
Vic Roads Map Reference_	

This document sets out the procedures the Dam Owner is obliged to take in the case of a Major Event or incident occurring at the dam. Priority of Action:

- > Saving Life
- > Saving Property
- > Dam Structure Damage Control



he dam	owner	is resp	onsible	for	keeping	this	document	up-to-dat	e
JPDATED									

# SELECT APPROPRIATE SUBJECT BELOW AND FLIP CHART PAGE FOR QUICK REFERENCE ON PROCEDURE

Black text for Information

White text for Decision

Red text for action





POLICE	Ph (03)	
STATE EMERGENCY SERVICE (SES)		
ENGINEER	Ph (03)	
LICENSING AUTHORITY	Ph (03)	
MUNICIPAL COUNCIL	Ph (03)	
DEPT. OF SUSTAINABILITY & ENVIRONMENT - EMERGENCY CO-ORDINAT		All Hours
MET. BUREAU WEATHER REPORTS		
DOWN STREAM NEIGHBOURS		_ Ph



#### **EVENTS**

High Rainfall/Floods – Storms – Earthquake – Other

### **EMERGENCY INCIDENTS**

(Overtopping, Wave Damage, Cracking, Slips, Structural Failure) (Slides, Slumping, Increased or New Seepage, Piping, Sandboils) (Other abnormal signs or behaviour)



Be alert to potential developments and maintain close vigilance during extreme events or perceived abnormal behaviour of the dam



Maintain safety requirements at all times during response actions



Take actions as outlined in this emergency response flip chart

**EMERGENCY EVENTS AND/OR INCIDENTS** 

#### **DAM SAFETY** EMERGENCY PLAN

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### **MAJOR STRUCTURAL FAILURE**



HAS ROUTINE CHECK DETECTED ANY EMBANKMENT MOVEMENT, SLIPS, INTERNAL OR EXTERNAL EROSION?

#### ARE THERE ANY SIGNS THAT THE DAM MAY FAIL?\*

\*If unsure, notify emergency contacts to place them on alert. Remember that once started, progress to failure may be rapid.



EVALUATE EXTENT OF DAMAGE AND ADVISE EMERGENCY RESPONSE PERSONNEL IF UNCONTROLLED RELEASE OF WATER IS POSSIBLE



RECORD ALL INCIDENT CONTAINMENT ACTIONS



IMMEDIATELY CONTACT POLICE, SES, ECC, CONSULTING ENGINEER, LICENSING AUTHORITY. REFER TO CONTACT NUMBERS PAGE



RECORD EVENT (TIMES, PHOTOGRAPHS, NOTES, VIDEO, COMMUNICATIONS LOG AND MAINTAIN COMMUNICATIONS)



INITIATE DAMAGE CONTROL IF SAFE TO DO SO

**MAJOR STRUCTURAL FAILURE** 

#### **DAM SAFETY** EMERGENCY PLAN

POLICE	Ph (03)	 Office After Hours
STATE EMERGENCY SERVICE (SES)		
ENGINEER	Ph (03)	
LICENSING AUTHORITY	Ph (03)	
MUNICIPAL COUNCIL	Ph (03)	
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MET. BUREAU WEATHER REPORTS		
DOWN STREAM	Name	 Ph
NEIGHBOURS		Ph
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### HIGH RAINFALL OR STORM EVENT





**HIGH RAINFALL OR STORM EVENT** 

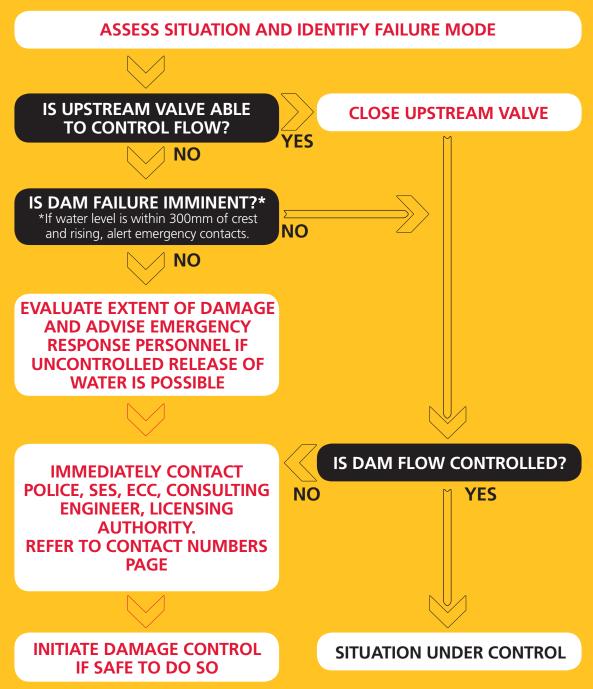


POLICE	Ph (03)	
STATE EMERGENCY SERVICE (SES)	Ph (03)	
ENGINEER	Ph (03)	
LICENSING AUTHORITY	Ph (03)	
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DOWN STREAM NEIGHBOURS	Name Name	



### **OUTLET WORKS FAILURE**





**OUTLET WORKS FAILURE** 

#### **DAM SAFETY** EMERGENCY PLAN

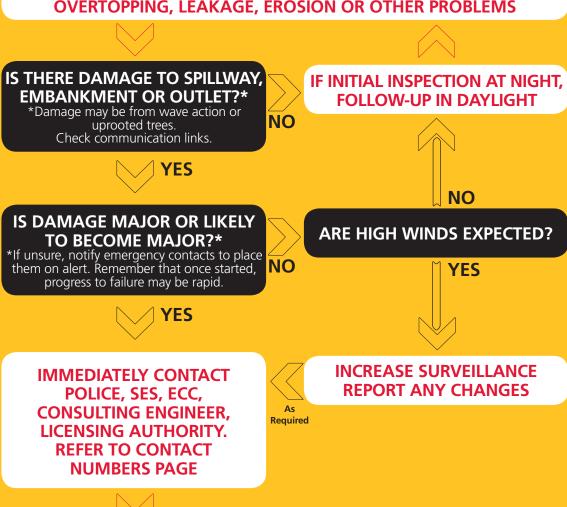
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ENGINEER	Ph (03)		
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MUNICIPAL COUNCIL	Ph (03)		
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### **EXTREME FLOOD EVENT**







INITIATE DAMAGE CONTROL
IF SAFE TO DO SO

**EXTREME FLOOD EVENT** 

#### **DAM SAFETY** EMERGENCY PLAN

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STATE EMERGENCY SERVICE (SES)			
ENGINEER	Ph (03)		
LICENSING AUTHORITY	Ph (03)		
MUNICIPAL COUNCIL	Ph (03)		
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MET. BUREAU WEATHER REPORTS			
DOWN STREAM NEIGHBOURS	Name Name	Ph	_
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### **EARTHQUAKE EVENT**



INSPECT DAM IMMEDIATELY EARTHQUAKE EVENT IS FELT/NOTIFIED AND MAINTAIN VISUAL MONITORING FOR 24hrs

### IS THERE DAMAGE TO SPILLWAY, EMBANKMENT **OR OUTLET?\***

\*Damage may be from embankment subsidence, dam breach or overtopping. NO

IF INITIAL INSPECTION AT NIGHT. **FOLLOW-UP IN DAYLIGHT** 

YES

#### IS DAMAGE MAJOR OR LIKELY TO BECOME MAJOR?\*

\*If unsure, notify emergency contacts to place them on alert. Remember that once started, progress to failure may be rapid.

NO

YES

**IMMEDIATELY CONTACT** POLICE, SES, ECC, CONSULTING **ENGINEER, LICENSING AUTHORITY. REFER TO CONTACT NUMBERS PAGE** 

**INITIATE DAMAGE CONTROL** IF SAFE TO DO SO

**EARTHQUAKE EVENT** 



POLICE	Ph (03)	·	
STATE EMERGENCY SERVICE (SES)			Office
ENGINEER	Ph (03)		
LICENSING AUTHORITY	Ph (03)		
MUNICIPAL COUNCIL	Ph (03)		
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DOWN STREAM NEIGHBOURS	Name Name		Ph _ Ph _ Ph



# **DAM OWNER ROLE AND RESPONSIBILITIES**



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#### **RESPONSIBILITIES**

The Dam Owner is responsible for regular monitoring and visual inspection of conditions at the dam.

The Dam Owner is responsible for providing the initial timely and accurate notifications to the Police and/or State Emergency Service and the Emergency Co-ordination Centre.

The Dam Owner is responsible for providing subsequent notification and preventative action recommendations, accompanied by appropriate emergency public information to the Police and/or State Emergency Service to assist them in making timely and accurate decisions regarding their warning and evacuation responsibilities.

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#### **DAM SAFETY STATUS**

The Dam Owner is required to conduct a safety evaluation of the dam and to have identified any deficiency in the dam's safety.

The Dam Owner is required to take adequate steps to reduce the potential risk of dam failure based upon the results of the safety evaluation, and to maintain an appropriate dam safety monitoring procedure.

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#### **DETECTION OF EVENT**

The existing monitoring installations located at the dam and observations by the Dam Owner will be used as the primary method for incident detection.

Emergency events affecting the dam will be detected primarily through visual observations made on-site.

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#### **DECISION MAKING**

The Dam Owner is responsible for making appropriate dam safety related decisions based on advice from a Consulting Engineer where appropriate. The Dam Owner is also responsible for authorising immediate expenditure so that urgent repair work will not be delayed.

To assist the Dam Owner in making effective decisions regarding repair work on the dam, the Emergency Action Plan includes sources of plant, equipment, materials, and labour; and engineering expertise for use during an emergency. The materials portion includes sources for clay, sand, gravel, stone, riprap, sandbags, cement, plastic sheeting, etc.

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#### **NOTIFICATION**

Initial notification of a problem affecting dam safety shall be made by the Dam Owner to the Police, Emergency Services, Consulting Engineers and DSE if dam failure is possible or imminent. In the event of a dam safety emergency arising, the Dam Owner shall be responsible for continuous reporting of dam status in accordance with the Emergency Action Plan.

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#### **COMMUNICATION SYSTEM**

The Dam Owner's landline telephone and mobile telephone numbers:	

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Radio: The Dam Owner has two-way radio communication facilities: Yes / No

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DOWN STREAM NEIGHBOURS	Name Name	



### PLAN FOR DAMAGE CONTROL



ASSESS THE SEVERITY OF THE DAM DEFECT REQUIRING DAMAGE CONTROL RESULTING FROM STORM, FLOOD, EARTHQUAKE OR ANY OTHER FACTOR.



#### IS NOTIFICATION REQUIRED?\*

\*If unable to secure repair services, notify emergency contacts. Remember that once started, progress to failure may be rapid.



#### **ENACT EMERGENCY ACTION PLAN**

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SELECT THE PERSONNEL, PLANT, EQUIPMENT AND MATERIALS TO ASSIST IN DAMAGE MITIGATION/REPAIR FROM THE LISTING BELOW.



#### **PERSONNEL SOURCES**



Name \_\_\_\_\_

**Equipment** 

#### **PLANT & EQUIPMENT SOURCES**



#### **MATERIALS SOURCES EOUIPMENT**

# Name \_\_\_\_\_ Ph \_\_\_\_\_\_ Address\_\_\_\_\_ Labour Name \_\_\_\_\_ Ph \_\_\_\_\_ Address\_\_\_\_\_

**Consulting Engineer** 

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Name _	 	
Other		
Name _		
Ph		

Name	
Ph	
Address	
Sand, Gravel or Rock	
Name	
Ph	
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Other		
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### PLAN FOR DAMAGE CONTROL

# **NOTES**





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