

# Dam Pre-Release and Surcharge Policy

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## 1 Background

Under the Statement of Obligations (September 2012), clause 5-2.2, South Gippsland Water (SGW) is obliged to make available to the public its policy on pre-release of water from its dams and surcharge of water levels in its dams.

Consistent with established ANCOLD Guidelines. SGW manage 14 Dams and 2 large storage service basins which have each been constructed for the purpose of water storage for potable water supply.

## 2 Purpose

This Policy is to define SGW's operational practices and related procedures in relation to pre-release and surcharge of dams during significant rainfall events.

## 3 Definitions

For the purpose of this procedure only, the following shall mean:

**FSL:** Full Supply Level - the maximum normal operating level of the storage.

**Dam:** Constructed structure to create a reservoir.

**Reservoir:** Body of water retained by a dam.

**Spillway:** Built structure to allow safe passage of surcharged water.

**Uncontrolled:** Spillway without the ability to regulate flow once the water level is above FSL Spillway.

**Surcharge:** Water in a reservoir above FSL.

**Attenuation:** Controlled release/retarding of flood water in the reservoir as it spills.

**SGW:** South Gippsland Water.

## 4 Policy

### 4.1 Pre-release from Dams

SGW manages its dams in accordance with requirements as listed below:

- 1) Dam Safety;
- 2) Water Supply Security (Ensuring maximum possible volumes of water are harvested and stored in the reservoir subject to water quality and environmental flow obligations);
- 3) Mitigation of potential flood impacts.

Dam Safety:

- SGW will undertake controlled releases of water by means of scour outlets from a reservoir when it is deemed necessary for dam safety reasons.

Water Supply Security:

- SGW will manage its dams to maximise water harvest while minimising any potential safety or flood risk to the community and ensuring compliance with environmental flow obligations.

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Mitigation of flood impacts:

- SGW’s dams are not designed to be able to allow release of large volumes of water, either prior to or during a flood event. Typically, SGW dams will reach surcharge levels above FSL and spill through a spillway to allow safe passage of any flood flows;
- All SGW dams have uncontrolled spillways and do not have associated flood mitigation manuals as it is not possible to moderate the discharge during spillway discharge or flood events;
- The capacities of the spillways at SGW’s dams are designed to ensure the safety of the dam in extreme flood events such that the water does not rise above the crest of the dam;
- Controlled low volume releases from our reservoirs are regularly made to ensure compliance with environmental flow obligations. These releases are planned and actively managed to ensure the water released for environmental purposes does not cause or contribute to flood or over bank flow events.

## 4.2 Surcharging of Dams

- SGW’s dams have uncontrolled spillways. As such no dam storages can be operated to maintain a surcharge condition above spillway level;
- As water levels rise above the spillway crest, the spillway comes into operation. When the inflows to the reservoir increase, the water level will naturally surcharge above the spillway crest. Should the inflow volume of the water above FSL be greater relative to the outflow capacity of the spillway, the dam will have some capacity to temporarily store surcharge floodwaters as water levels increase. The larger the reservoir volume compared to spillway width the more attenuation the dam may provide. The effect of this is to reduce the peak outflows from the dam but extend the duration of the flood event;
- Reservoirs will continue to spill until the water level returns to the spillway crest level.

## 5 Responsibilities

**South Gippsland Water:** is responsible for making available this policy to the general public

**Manager Operations:** is responsible for ensuring that all operations staff involved in the operation of SGW’s dams are aware of their roles and responsibilities in relation to pre-release from dams and the inflow/discharge aspects of the surcharging of dams.

**Reservoir Operations Staff:** are responsible for managing SGW dams in accordance with the above policy.

## 6 References

Statement of Obligations (September 2012)

This document is to be reviewed in **January 2017** or earlier as required.  
 This document must not be released to external parties without approval by the Managing Director.

DOCUMENT APPROVAL		
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Managing Director Signature:		