



OPENING OF COASTAL LAGOONS



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COMMUNITY GROWTH - CULTURE

POLICY OBJECTIVES

To mitigate flooding by opening the coastal lagoons in a manner that minimises the impacts on the environment of the coastal lagoons and the surrounding areas.

POLICY STATEMENT

- 1 This Policy relates to Terrigal, Wamberal, Avoca and Cockrone Lagoons.
- 2 Council will arrange the opening of the coastal lagoons in accordance with the requirements of the Coastal Lagoons Floodplain Management Plans and the Coastal Lagoons Management Plan.
- 3 Lagoons will be opened in accordance with the following procedure (refer to Attachment).

PROCEDURE

The procedure (attached) being an administrative process, may be altered as necessary by the Chief Executive Officer

(Min No - 4 October 1968)

(Minute No 515/1988 - 21 June 1988).

(Minute No 1085/1989 - 26 September 1989)

(Minute No 547/1994 - 14 June 1994)

(Minute No 322/1996 - 23 April 1996 - Review of Policies)

(Minute No 201/1999 - 26 October 1999)

(Minute No 239/2000 – 24 October 2000 – Review of Policies)

(Minute No 214/2005 - 8 March 2005) Review of Policies

(Minute No 311/2009 - 5 May 2009 - Review of Policies)

(Min No 2013/388 - 16 July 2013 - Review of Policies)

ATTACHMENT - PROCEDURE

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PROCEDURE FOR THE OPENING OF THE COASTAL LAGOONS

INTRODUCTION

Lagoon opening using mechanical means and the subsequent breakout and drainage of the lagoon has been developed as a management method following extensive study and consideration of lagoon ecology, flood behaviour and flood management and long term water quality issues.

Openings between July and October will have optimum benefits in regard to the recruitment of commercial fish species, however this will be weather dependent.

OPENINGS

Terrigal, Wamberal, Avoca and Cockrone Lagoons have marked level heights at various points around the shores. These levels show the critical heights above which local residences and property may be flooded. Once the water reaches these levels, the lagoons **must** be opened. The let out levels are shown on the attached schedule.

SANDBAR LOWERING

As heavy rain occurs, there is a possibility that lagoons can quickly fill and exceed the heights at which the lagoons are let out. In order to control this eventuality, the flood management plans for the lagoons have calculated levels at which the sandbars of lagoons should be retained in order to allow the lagoons to let themselves out should severe floods occur. The levels at which the sandbars should be kept are indicated in Table 1.

Sandbar heights are to be checked a minimum of once per month by survey – if the sandbar is higher than the sandbar height indicated in table 1 arrangements will be made to lower a section 2m wide to a level which is approximately half way between the let out level and sandbar height indicated in Table 1. This work will be completed during the following working week.

Records of sandbar heights and when sandbar lowering occurs will be kept by the Construction Maintenance unit at Erina Depot.

SAFETY

Suitable signs and barriers are to be erected at the time of opening and maintained during the initial run out period.

There will be times when the sandbars need to be excavated but the sea conditions are so large that working on the sandbars would be dangerous and contravene occupational safety provisions. In these circumstances the work shall be delayed until the tide and sea state have moderated to a point at which the work can be safely

carried out. However, due to the flooding that is likely to occur, any delay should be kept to a minimum.

ENVIRONMENTAL FACTORS

The following environmental considerations have been identified and are included in the opening procedures.

- * When opening Avoca Lagoon, Council should consider the time at which the lagoon is opened. It should reach a maximum run out velocity towards the top of the ocean tide so that the scouring of the opening is minimised. The purpose of this consideration is so that the width to which the entrance scours is kept to a minimum to enable the lagoon to quickly close and prevent the lagoon from being open for too long a period. This is considered reasonably critical at Avoca because of the huge extent of mud flats which are exposed with a high velocity run out. This can result in long term odour problems for the nearby residents if the lagoon does not close off quickly.
- * When openings are made in the lagoons, they should be made in a central area of the sandbar. The intent is to try to avoid a meandering outlet which in the past has caused difficulty to either bank of the outlet channel if it tends to meander when it runs out heavily. Openings offset from the centre seem to encourage meandering or scouring which could be problematic to nearby property.
- * Avoca Lake (at least) has a population of the endangered Green and Golden Bell Frog (*Litoria aurea*). Lagoon opening has the potential to disrupt breeding efforts of this species as the peripheral breeding sites prematurely drain when the lagoons are opened. Where possible, pending lagoon opening is to be notified to Council's Community Growth Department and Department of Environment and Conservation with sufficient notice to ascertain breeding status and salvage strategies where necessary.

MONITORING OF LEVELS

During periods of rain, residents may telephone Council staff to request the lagoon to be let out, fearing flooding. Many of these calls may be premature but need to be checked. Listed below in this procedure are the contacts for the lagoon releases and the lagoon level telephone monitor numbers.

The Construction Section at Erina Depot monitors the lagoon levels continually and generally lagoon levels should not reach the "call out stage" via the "on call duty system" without responsible staff being aware of the water levels. However, each lagoon level may be checked if required by calculating the difference between the let out level listed below and the current lagoon level gained by telephoning the lagoon in question.

Example:

- 1 Telephone Terrigal and you are given a height of say 1.205.
- 2 Deduct 1.205 from the let out level height of 1.230.
- 3 The calculation gives you the measurement of 0.025 which informs you that the current lagoon level is only 25 mm below the let out level.

If the telephone monitoring system fails the responsible person shall arrange for visual monitoring to guard against water levels rising above the let out levels.

The sandbar heights will be monitored visually using sighting aids with a maximum interval between inspections of 2 weeks. More regular inspection shall be carried out in wet weather or heavy sea conditions.

WHO TO NOTIFY

Advice of the impending opening is to be given to:

- A The local Fisheries Officer for any or all lagoons opened.
- B The Central Coast District Office of Department of Environment and Conservation for the impending opening of Wamberal Lagoon, and for Avoca Lake due to the presence of a population of the endangered Green and Golden Bell Frog (*Litoria aurea*).
- C Lifeguards and Lifesavers, if they are on duty at the time of the impending opening, shall be notified.
- D Council's Community Growth Department in regard to which lagoons have been opened, and the time they were opened.

The details of the openings are to be recorded in the database at Erina Depot.

TABLE 1

LET OUT LEVELS, SANDBAR HEIGHTS AND TELEPHONE NUMBERS FOR CURRENT WATER LEVELS			
LAGOON	LET OUT LEVEL m AHD	SANDBAR HEIGHT m AHD	TEL NO (INTERNAL USE ONLY)
TERRIGAL	1.230 m	1.7 m	4384 2992
WAMBERAL	2.400 m	2.6 to 2.7 m	4384 3561
AVOCA	2.090 m	2.7 to 2.8 m	4382 3247
COCKRONE	2.530 m	3.3 to 3.5m	4382 3263

OTHER INFORMATION

RELEASE OF LAGOONS - JOB NUMBERS

R0310.875 TERRIGAL LAGOON
R0310.876 COCKRONE LAGOON, COPACABANA
R0310.877 WAMBERAL LAGOON
R0310.878 AVOCA LAGOON