



Department of Public Works

The Director,
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Our reference:

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Contact: Mr. I. Taylor

19 DEC 1984

Dear Sir,

Ocean Shores Development Hydrology
and Hydraulics

The Department has completed its review of the above report and the following overall comments are offered:-

- (1) Storm Tides: The incidence of elevated ocean levels resulting from cyclones is considerably higher than suggested in the report. Data suggests the incidence is around 50% cyclones and 50% east coast lows. In addition, the hydrograph presented at Figure IV/20 is based upon prototype data, (i.e. 1954 cyclone at Tweed Heads) and as such was considered more appropriate for use than the other hydrographs represented at Figures IV/12 and IV/13 which are hypothetical in nature.
- (2) Hydrology: The Department concurs with the report, however, following Professor Pilgrim's report, the Nittim Regional Method cannot be regarded as an "equally legitimate" hydrological method.
- (3) Hydraulics: The findings of this portion of the report are generally concurred with. It is noted that a 0.3 m difference occurs between flood levels at the junction of the North Arm, Main Arm confluence is this study and the Brunswick Flood Study. The difference is considered reasonable given the respective order of accuracy of the two studies.
- (4) Siltation and Staging: The Department has previously concurred with these sections.
- (5) Effects on External Areas: The report did not address what measures the developer intends to undertake to mitigate against the effects of increasing velocities through South Golden Beach estate (i.e. unformed canal).
- (6) Effects of Siltation and Berm Buildup Upon the Performance of the Ocean Outlet: The report has indicated that siltation of the channel inside the ocean outlet can increase flood levels by 0.35 to 0.42 m and that a buildup of the berm in front of the outlet can raise flood levels by up to 1.5 m. Given the order of magnitude of these effects it is apparent that maintenance of the outlet area is critical to the success of this project and should be resolved as a matter of priority.

Given the above the Department concurs with the findings of this report subject to the resolution of points (5) and (6) above.

Yours faithfully,

K. F. Parr,
District Engineer

LETTER FROM PWD DATED 19TH DECEMBER 1984. WARNING OF FLOOD INCREASE BEHIND BLOCKED OUTLET CAUSED BY ANY BUILD UP OF SAND IN FRONT OF OUTLET.