

## **The Effect of the Suez Canal Development on the Tide and Tidal Current-Model Study**

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### **Abstract**

The effects of deepening and widening the Canal on the tide and tidal current was studied using the Princeton Ocean Model (POM). There is a relatively large increase of tidal range inside the canal. The total increase of tidal range in Great Bitter Lake after finishing the two stages of the development project is more than 120 % from that before 1975. The peak of S-N current in the southern section increases from 68 cm/sec before 1975 to 76 cm/sec in the present stage and to 83 after finishing the stage II of the development project. The peak of N-S current increases from 83 cm/sec to 94 cm/sec in the present stage and to 105 after finishing the stage II. The maximum ratio of increasing of the tidal current is occurred in the northern section (between Lake Timsah and Port Said). The S-N current increases at El-Tina from 21 cm/sec to 37 cm/sec with a ratio more than 75 %. While, the N-S current increases from 35 cm/sec to 52 cm/sec with a ratio of about 50 %.