

Introduction

Suez Bay locates between longitudes ($32^{\circ} 28'$ and $32^{\circ} 34'$) and latitudes ($29^{\circ} 52'$ and $29^{\circ} 57'$) (Fig. 1). It is a northern shallow extension of the Gulf of Suez, roughly elliptic in shape. The surface area is about 77.13 km^2 with a major axis (N-S) about 13.2 km. The average width along the minor axis (E-W) is about 8.8 Km. Considering navigational purposes, a channel dredged to a depth of around 20 m extends north from the Gulf of Suez through the Bay to Suez Canal. Suez City lies on the northwestern side of the Bay where several industries extend along the same side.

Morcos (1960) reported that the water level in Suez Bay rises during autumn, reaching its maximum in September. It decreases again gradually and reaches its mean level in May and June on its way down. Moreover, the author found that the annual variations of the water level due to tides, varies between 80 cm at neap tide and 150 cm in spring tide.

Meshal (1970) observed that northerly winds prevail during most of the year; in general they are weak or moderate. When wind blows violently from northwest, water in the northern 50 Km of the Gulf of Suez does not agitate because it lies in the wind shade of Ataq Mountains on the western side of the Gulf. In winter, winds come from the west most of the time. When they come from the southwest, they become sufficiently strong as to produce high agitation in the Gulf of Suez. Water of the Gulf of Suez enters the Bay along the eastern coast (Sinai side)