

## **Contribution of Atmospheric Contaminants to the Southern California Bight Water Column**

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### **INTRODUCTION**

The South Coast Air Basin (SoCAB) consists of non-desert portions of Los Angeles, Riverside, San Bernadino counties and all of Orange County extends approximately 100 Km from near Dana Point north to the crest of the San Gabriel and San Bernadino Mountain chain and westward to Malibu. Its east-west dimensions are approximately 200 Km, extending eastward to approximately 20 Km east Banning. A map showing the SoCAB is shown in Figure 1, with the South Coast Air Quality Management District (SCAQMD) monitoring stations marked on it.

The total area of the SoCAB is 20,000 Km<sup>2</sup>, however, if the mountain areas are eliminated from the calculation so as only to include the San Gabriel and San Fernando Valley the Los Angeles Basin and the coastal area to Dana Point, the area of SoCAB shrinks to about 13,000 Km<sup>2</sup>. If one assumes an impacted height of approximately 1 Km, the total air volume in SoCAB is 13,000 Km<sup>3</sup>.

The SoCAB is routinely studied by both the SCAQMD as well as the California Air Resource Board (CARB), which also have a network of monitoring stations, but most of them are shared with SCAQMD. Figure 2 shows station locations operated at various times by SCAQMD. A set of the primary pollutant components which are directly released by either stationary or mobile (automobile) sources are monitored by both SCAQMD as well as CARB, however, the latter agency also has the responsibility of monitoring Acid Rain. Whereas SCAQMD only monitors within the SoCAB, CARB monitors throughout California and has one station as San Nicolas Island, in the Southern California Bight, the only offshore monitoring station in Southern California.

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