

**INFORMATIONAL
CALENDAR ITEM**

116

A 54, 55

09/20/13

W 16001

W 10442

S 27, 28

R. B. Greenwood

**STAFF REPORT ON THE
MONITORING OF POSSIBLE SUBSIDENCE,
LONG BEACH UNIT, WILMINGTON OIL FIELD,
LOS ANGELES COUNTY**

PARTY:

California State Lands Commission

BACKGROUND:

The Long Beach area has experienced regional ground elevation changes (subsidence) due to ground water withdrawal, sediment compaction since 1929. Significant subsidence first occurred in the West Wilmington Oil Field in 1947. Oil field repressuring operations (injecting water) in the 1950s resulted in arresting that significant subsidence. When development of the East Wilmington Oil Field (Long Beach Unit) began in 1965, the operating agreements governing that development required oil field pressure control by adjusting water injection to prevent changes in ground elevation. Since 1965, there have been no major ground elevation changes in the Long Beach tidelands and adjacent areas attributable to subsidence.

The City of Long Beach conducts surveys twice each year, in May and October or November, for the purpose of monitoring changes in ground elevation of the Long Beach tidelands and adjacent areas. The Commission's staff reviews and interprets the benchmark elevation data from these semi-annual surveys. This report covers benchmarks surveyed in October 2012 and compares elevation changes that have occurred since completion of the previous survey in May 2012.

The results of the next regular elevation survey, conducted in May 2013, will be reported to the Commission after the data have been received and analyzed by the Commission's staff.

An area near the Civic Center declined up to 0.07 foot (0.8 inch), which is within the working ranges of 0.05 to 0.1 feet. Pier A declined 0.04 foot (0.5 inch) which

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was less than the decline shown on the previous survey attributable to increased water injection. After several years of elevation gain (up to 0.28 feet in 10 years), Piers C, E, and H showed 0.11 foot (1.3 inches) elevation loss, in response to adjustments of oilfield operations. A mitigation plan based on adjustments of oil field operations has been implemented and the area will be closely monitored for further action.

EXHIBIT:

A. Location Map

EXHIBIT A

