



DEPARTMENT

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OIL OPERATIONS • OIL PRODUCTION / SUBSIDENCE

March 14, 2006

HONORABLE MAYOR AND CITY COUNCIL  
City of Long Beach  
California**RECOMMENDATION:**

Receive and file the attached report, "Elevation Changes in the City of Long Beach, May 2005 to November 2005." (Citywide)

**DISCUSSION**

The City of Long Beach (City), through the Long Beach Gas and Oil Department (LBGO), supervises oil production and subsidence control operations in the Wilmington Oil Field. LBGO conducts elevation surveys every six months to monitor elevation changes in the oil field and surrounding City areas. This report focuses on elevation changes that have occurred from May 2005 to November 2005. The LBGO survey includes the following areas: Civic Center, Central City, Alamitos Bay, Naples, Harbor District, and an offshore area encompassing the four oil islands (Offshore).

The results of the six-month survey show elevations were stable in the Civic Center, Central City, Alamitos Bay, Naples, and Offshore areas. Harbor District elevations were stable except for a localized area of elevation loss centered along Henry Ford Avenue just north of the Cerritos Channel. This area is located over an oil reservoir that had been previously steam flooded. The steam flood was shut down in 1999 after high steam temperatures were found to cause compaction in the reservoir resulting in elevation loss. A program of cold-water injection was initiated and is cooling the reservoir to mitigate the elevation loss. The LBGO is continuing to study this area and acquiring data to further assess the elevation loss of approximately 0.10 feet (1.20 inches).

The LBGO survey uses a series of benchmarks to determine elevation changes. Studies by the Department's engineers and geologists show that the benchmarks may rise and fall in such a manner as to make an entire survey either optimistic (slightly up in elevation) or pessimistic (slightly down in elevation). These changes in elevations can be seasonal and may be associated with tidal cycles,

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temperature changes, and/or deep earth tectonic changes. Repressuring operations and the resulting rebound alter these patterns from time to time. Surface elevations in a rebounded area can be expected to fluctuate under changing water flood conditions.

Deputy City Attorney Charles Parkin reviewed this item on February 27, 2006.

TIMING CONSIDERATIONS

City Council action on this matter is not time critical.

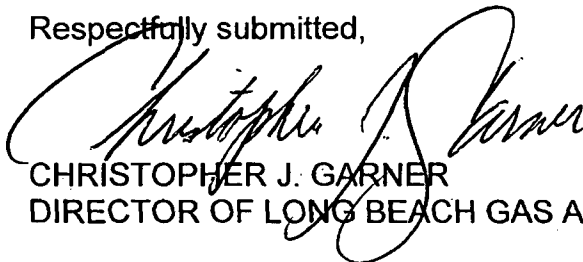
FISCAL IMPACT

There is no fiscal impact associated with this action.

SUGGESTED ACTION:

Approve recommendation.

Respectfully submitted,



CHRISTOPHER J. GARNER  
DIRECTOR OF LONG BEACH GAS AND OIL

CJG:jdj

Attachment

APPROVED:

  
GERALD R. MILLER  
CITY MANAGER