

# INVESTIGATION OF BIRTH DEFECTS AND COMMUNITY EXPOSURES IN KETTLEMAN CITY, CA

PUBLIC REVIEW DRAFT – NOVEMBER 2010



Arnold Schwarzenegger  
Governor  
State of California



Linda S. Adams  
California Environmental Protection Agency



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California Department of Public Health

# Brief History

- January 2010 report
  - Birth defects elevated in Kettleman City in 2008
- Gov. Arnold Schwarzenegger
  - California Department of Public Health (CDPH)
    - Investigation of birth defects
  - California Environmental Protection Agency (Cal/EPA)
    - Exposure assessment of Kettleman City environment



# **Draft Report - Part 1**

## **Investigation of Birth Defects in Kettleman City**



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**California Department of Public Health**  
**December 2, 2010**



**1: What did CDPH do?**

**2: What did we find?**

**3: What are the next steps?**

# What did CDPH do?

- Looked for scientific info on what factors could increase risk of birth defects
- Consulted with experts



# What did CDPH do?



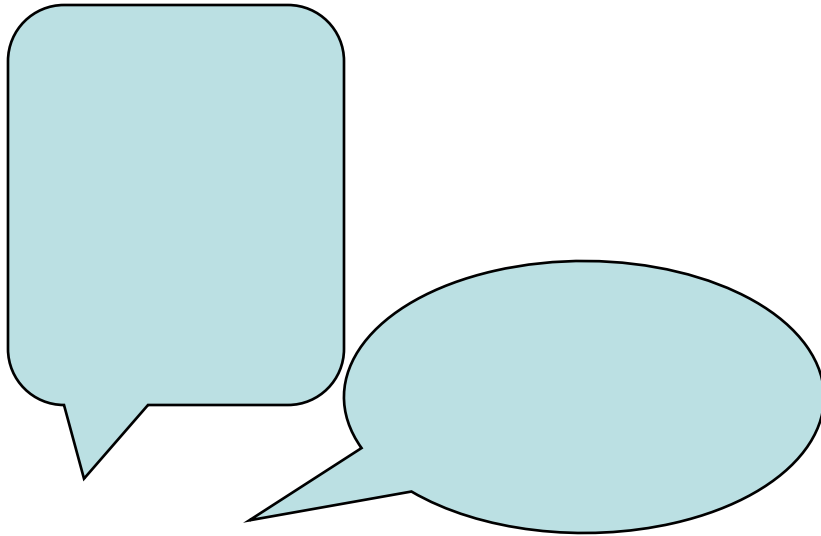
- Detailed review of birth defects registry records from 2007 - March 31, 2010

# What did CDPH do?

**Review additional  
medical records  
of mothers and  
children with birth  
defects**



# What did CDPH do?



**Detailed in-person  
interviews with 6  
of 11 mothers**

# What did CDPH do?



Questionnaire for mothers:

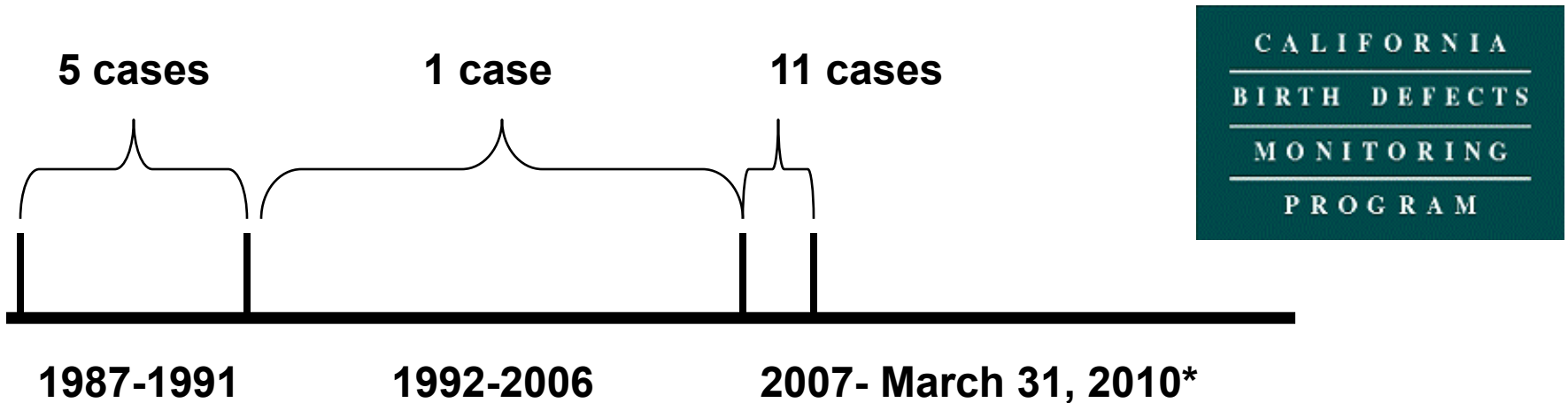
- Medical and pregnancy family history of birth defects
- Lifestyle factors (such as cigarettes and alcohol)
- Environmental and occupational exposures

# What did CDPH do?

- Cancer data review for the area (1996 – 2008)
- California Cancer Registry



# What did we find?



- Most recent period - more than expected
- No additional birth defects in Kettleman City children 3/31/10 - 10/2010

*\* For the investigation period, children of mothers who had lived in Kettleman City during pregnancy but moved before delivery were included.*

# What did we find?

Birth defects were all different,  
though some had similar features



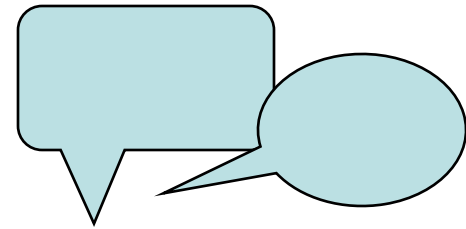
- Some “syndromes” with multiple birth defects
- Others were single defects
- Cleft lip or cleft palate can happen alone or as part of over 400 different syndromes

# What did we find?



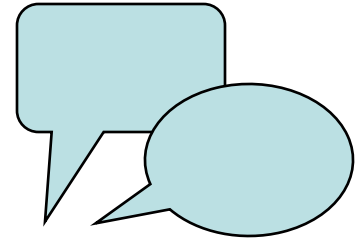
- No unusual patterns or types
- Suggests no common exposure

# What did we find in interviews with 6 mothers?



- Mothers had pre-natal care and generally followed good health practices during pregnancy
- Mothers did not have significant medical conditions known to increase risk for birth defects
- None used alcohol, drugs, or tobacco

*\*Many results in the report and here are presented in general terms to protect mothers' and children's privacy and confidentiality*



# What did we find in interviews with 6 mothers?

- No specific cause identified
  - Most did not drink tap water
  - None spent time at hazardous waste landfill, abandoned oil fields, or near the freeway
  - None had hobbies with chemicals
  - None ate fish caught by family or friends

# What did we find in interviews with 6 mothers: pesticides

**Work** – Some mothers worked in agriculture, but job descriptions did not suggest significant exposures

**Home** – Mainly in yard  
Unlikely to have resulted in significant exposure

## Take-home exposures

Fathers who worked in agriculture did not wear work clothes at home





# What did we find? Review of cancer, 1996-2008

- California Cancer Registry found no increase in cancer
  - 113 cases diagnosed; 143 expected
  - Most common - prostate, breast, and lung
- 5 childhood cancers (mainly leukemia); none since 2006
  - Most childhood cases occurred outside of Kettleman City itself

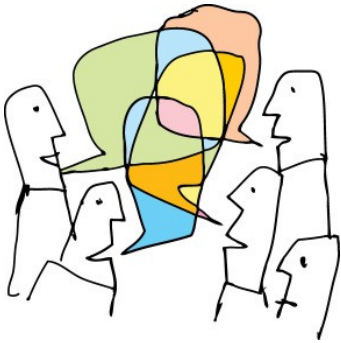
# What are the next steps?



- Continue monitoring for birth defects
  - See whether recent increase continues or goes back to earlier pattern
- Continue monitoring for cancer
- Provide funding and technical assistance to local water district to identify a new source of water for the system

# Questions and comments on draft report

Available in English and Spanish at: Kettleman City post office, library, community center, elementary school.



For information about the CDPH part of the report, please contact: Tivo Rojas-Cheatham

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Written comments can be submitted until December 21, 2010, to: Dr. David Siegel

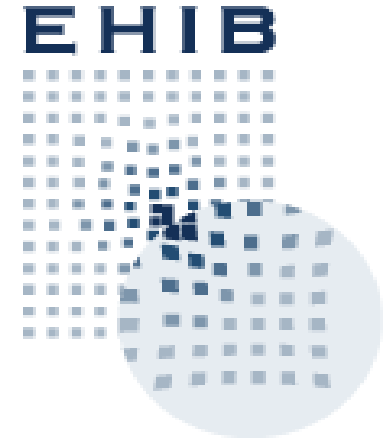
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## California Department of Public Health

- California Birth Defects Monitoring Program  
[www.cdph.ca.gov/programs/cbdmp/Pages/default.aspx](http://www.cdph.ca.gov/programs/cbdmp/Pages/default.aspx)
- California Cancer Registry: <http://www.ccrca.org/>
- Environmental Health Investigations Branch: <http://www.ehib.org/>