

# Status and Update

## Modeling historical drinking-water contamination at Camp Lejeune

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April 5, 2011

# Status of Hadnot Point-Holcomb Boulevard Chapter Reports

(release of reports is not in alphabetical order)

- ❑ **Chapter C – IR sites groundwater contaminants**
  - Publicly released – October 2010
- ❑ **Chapter B - Geohydrologic framework**
  - Addressing peer-review comments
  - Submit for ATSDR/NCEH eClearance mid-April 2011
- ❑ **Chapter D – AST/UST sites groundwater contaminants**
  - Draft being prepared
  - Submit for peer review – end of May 2011
- ❑ **Chapter G – Water-level data and groundwater flow**
  - Tentative draft for Project Officer review – end of August 2011

# **Status of Hadnot Point-Holcomb Boulevard Chapter Reports—continued**

**(release of reports is not in alphabetical order)**

- ❑ **Chapter A – Summary of Findings**
  - Tentative public release – end of December 2011
- ❑ **Executive Summary**
  - Tentative public release – end of December 2011
- ❑ **Chapters E, F, H, I, J, K, L, M, N, O, P**
  - Detailed technical information, data, and simulations
  - March-June 2012

## Summary and comparisons of data

| Data category   | Number of data values* |         |
|---|------------------------|---------|
|   | HP-HB area             | TT area |
| Wells, hydropunch points, and boreholes   | 1,748                  | 222     |
| Water-level measurements  | 12,255                 | 789     |
| Groundwater samples analyzed for chlorinated solvents (PCE, TCE, DCE, vinyl chloride) | 4,108                  | 192     |
| Groundwater samples analyzed for BTEX   | 6,668                  | 191     |
| Supply-well and monitor-well aquifer and slug tests                                   | 264                    | 33      |
| Water-supply wells analyzed for operational history                                   | 100                    | 16      |
| Historically contaminated water-supply wells (concentration greater than the MCL)     | 12                     | 4       |
| Contaminant sources (for study analyses)  | 25                     | 1       |

\*All values are approximate at this time

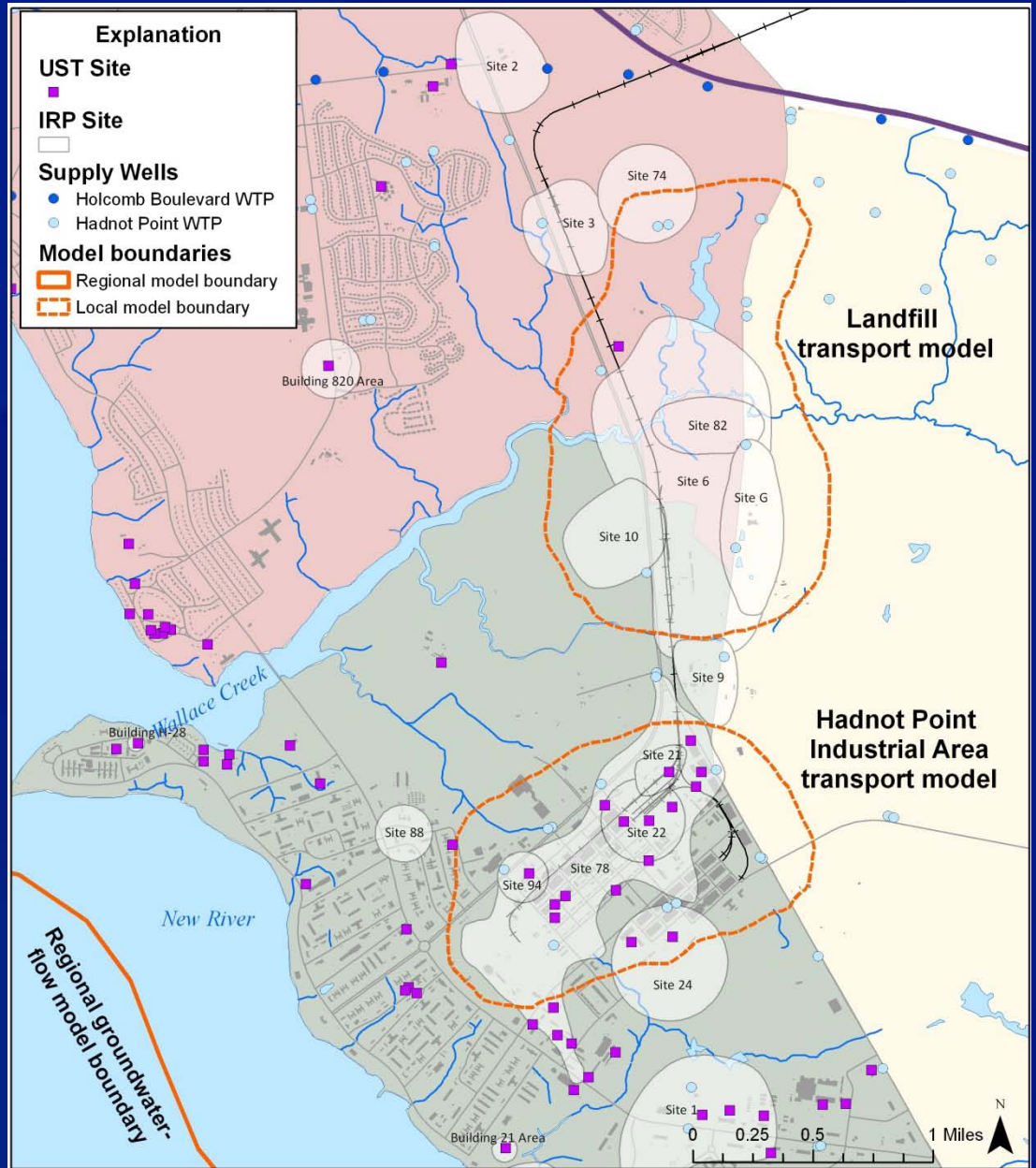
# **Status of Hadnot Point-Holcomb Boulevard water-modeling analyses**

- ❑ **Steady-state (pre-pumping), “regional” groundwater flow model is calibrated**
- ❑ **Transient groundwater flow models**
  - 100 supply wells (72 to HP WTP, 24 to HB WTP, 2 irrigation, 1 emergency/stand-by, and 1 well never connected to WTP )
  - Will be used as a “transitional” model to test boundary locations for contaminant fate and transport models
- ❑ **Contaminant fate and transport models – Focus on HP industrial and landfill areas**
  - ATSDR staff – Single-species PCE and TCE
  - Ga.Tech – Multispecies, multiphase PCE and TCE
  - Ga.Tech – LNAPL (benzene) in HP fuel farm and industrial area



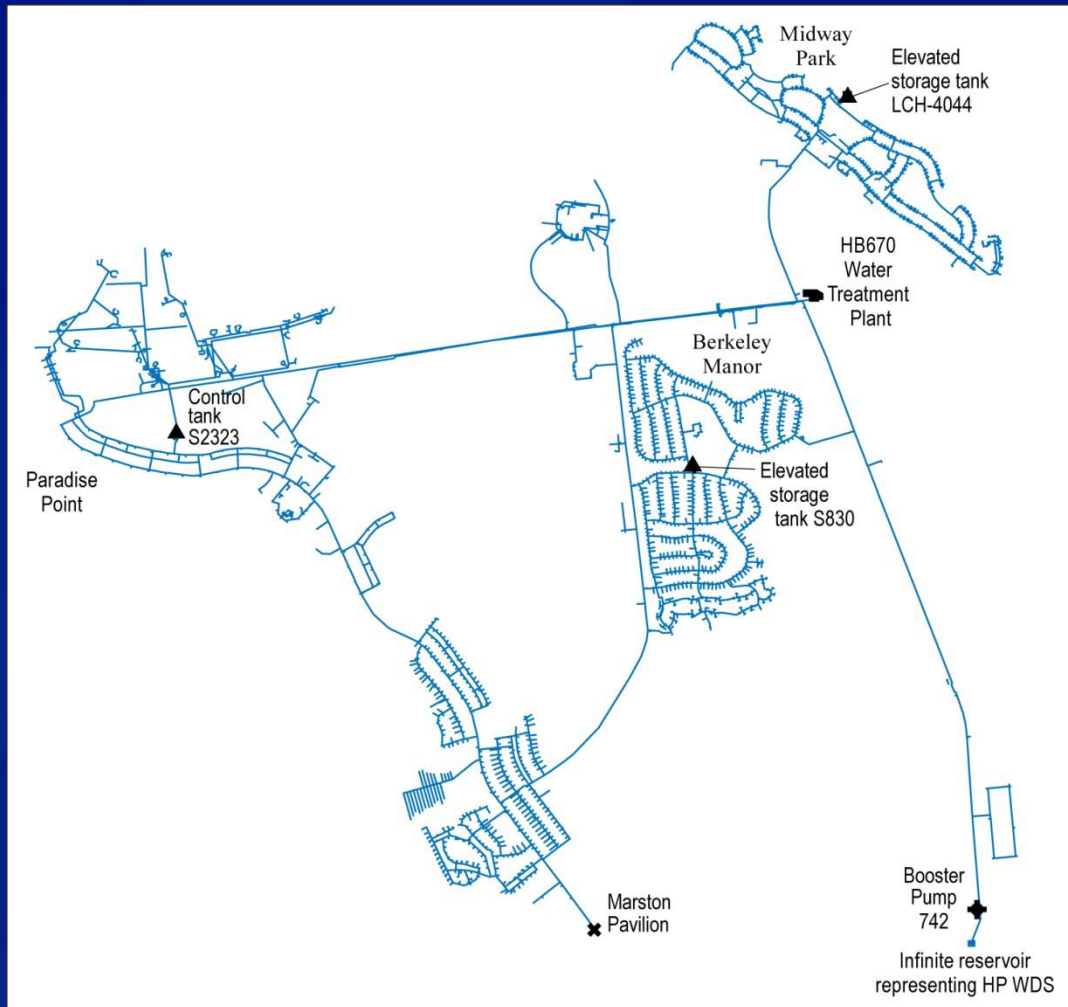
**Hadnot Point-Holcomb Boulevard groundwater-flow and transport model boundaries**

# Hadnot Point-Holcomb Boulevard transport model boundaries



## **Status of Hadnot Point-Holcomb Boulevard water-modeling analyses--continued**

- ❑ **Intermittent water transfers between Hadnot Point and Holcomb Boulevard water treatment plants (WTPs)**
  - Water-distribution system model calibrated
  - Simulating event-based scenarios (minimum, average, maximum)
  - Will provide epidemiologists with range of concentrations for various family housing areas within the Holcomb Boulevard WTP service area



**Holcomb Boulevard water-distribution system model network**

# Questions ?

**For more information please contact Agency for Toxic Substances and Disease Registry**

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The findings and conclusions in this presentation are those of the author and do not necessarily represent the official position of the Centers for Disease Control and Prevention.