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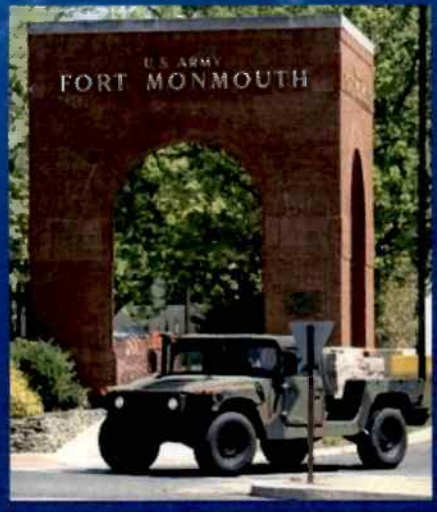
U.S. ARMY FORT MONMOUTH

OVERVIEW OF FTMM-04 REMEDIAL INVESTIGATION/FEASIBILITY STUDY (RI/FS) REPORT

RESTORATION ADVISORY BOARD
OCTOBER 2, 2014 MEETING



Agenda

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- RI/FS Process under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and New Jersey Department of Environmental Protection (NJDEP) New Jersey Administrative Code (N.J.A.C.) 7:26 E Technical Requirements for Site Remediation (TRSR)
- Location of Fort Monmouth (FTMM) -04
- Background/Site History FTMM-04
- Remedial Investigation (RI) Summary
  - Site Characterization
  - Risk Assessment
- Feasibility Study (FS) Summary

RI/FS Process under CERCLA, and NJDEP N.J.A.C 7:26 E TRSR

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- FTMM closed under 2005 Base Realignment and Closure (BRAC) actions in September 2011.
- BRAC requires RI/FS process under CERCLA to be followed to close out sites.
- NJDEP provides primary regulatory oversight, and must also comply with NJDEP requirements, to extent possible.
- Parsons is preparing RI/FS Reports to achieve BRAC requirements and gain final approval of documents by NJDEP.
- NJDEP has primacy for regulatory oversight for FTMM.
  - Review and approval of RI/FS Reports, and other associated documents
  - Provides approval of final remedies and issuance of No Further Action (NFA) letters

What is RI/FS Process?

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- RI/FS is a CERCLA process to evaluate sites
- Remedial Investigation
  - nature and extent of contaminants → def. contaminants of potential concern (COPCs)
  - risk assessment → def. of contaminants of concern (COCs)
- Feasibility Study
  - Development and screening of alternatives
  - Treatability Investigations (if necessary)
  - Detailed analysis of alternatives
- Preparation of RI/FS Report
- RI/FS process leads to Proposed Plan (PP) and Record of Decision (ROD)

FTMM

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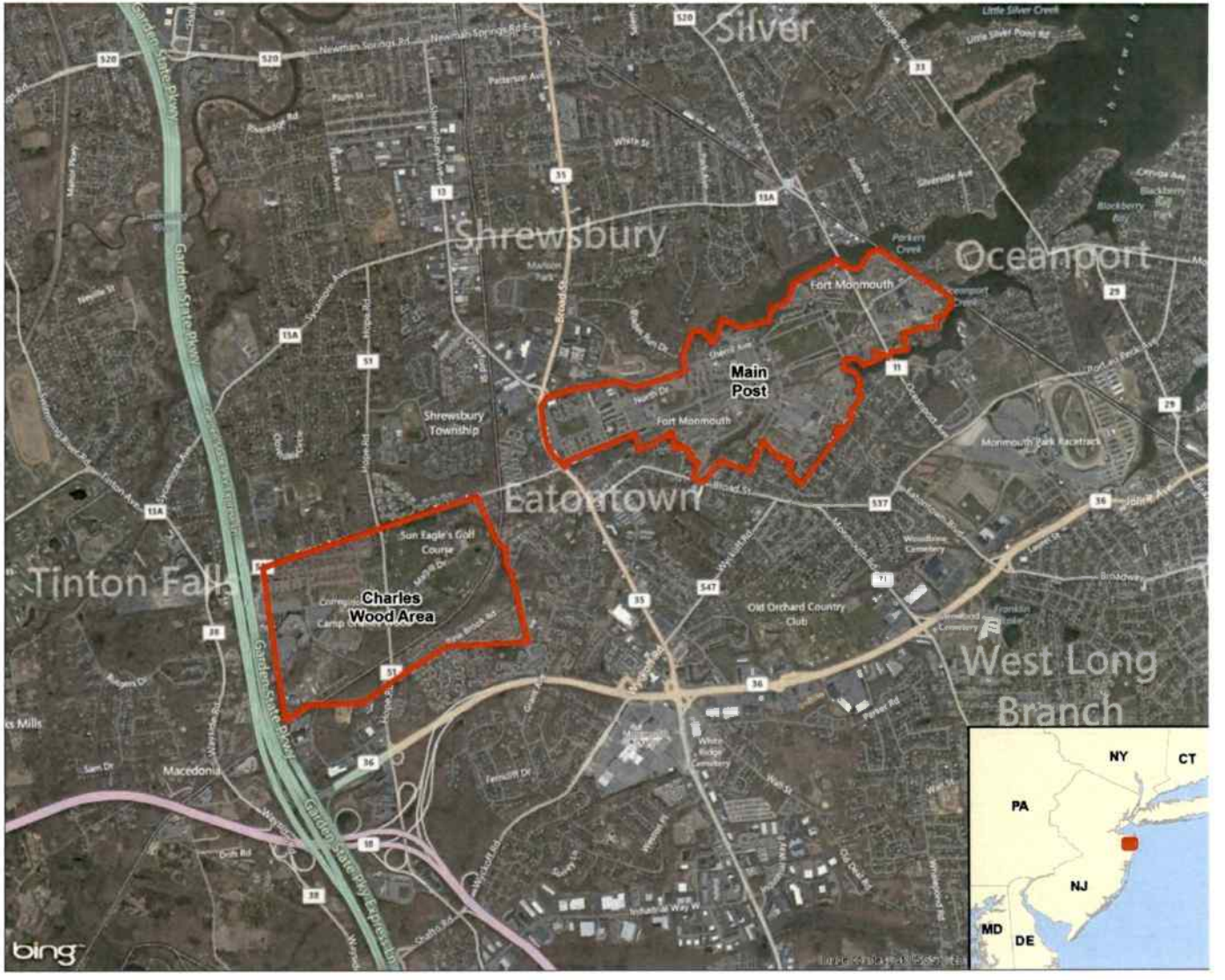

Location of FTMM-04

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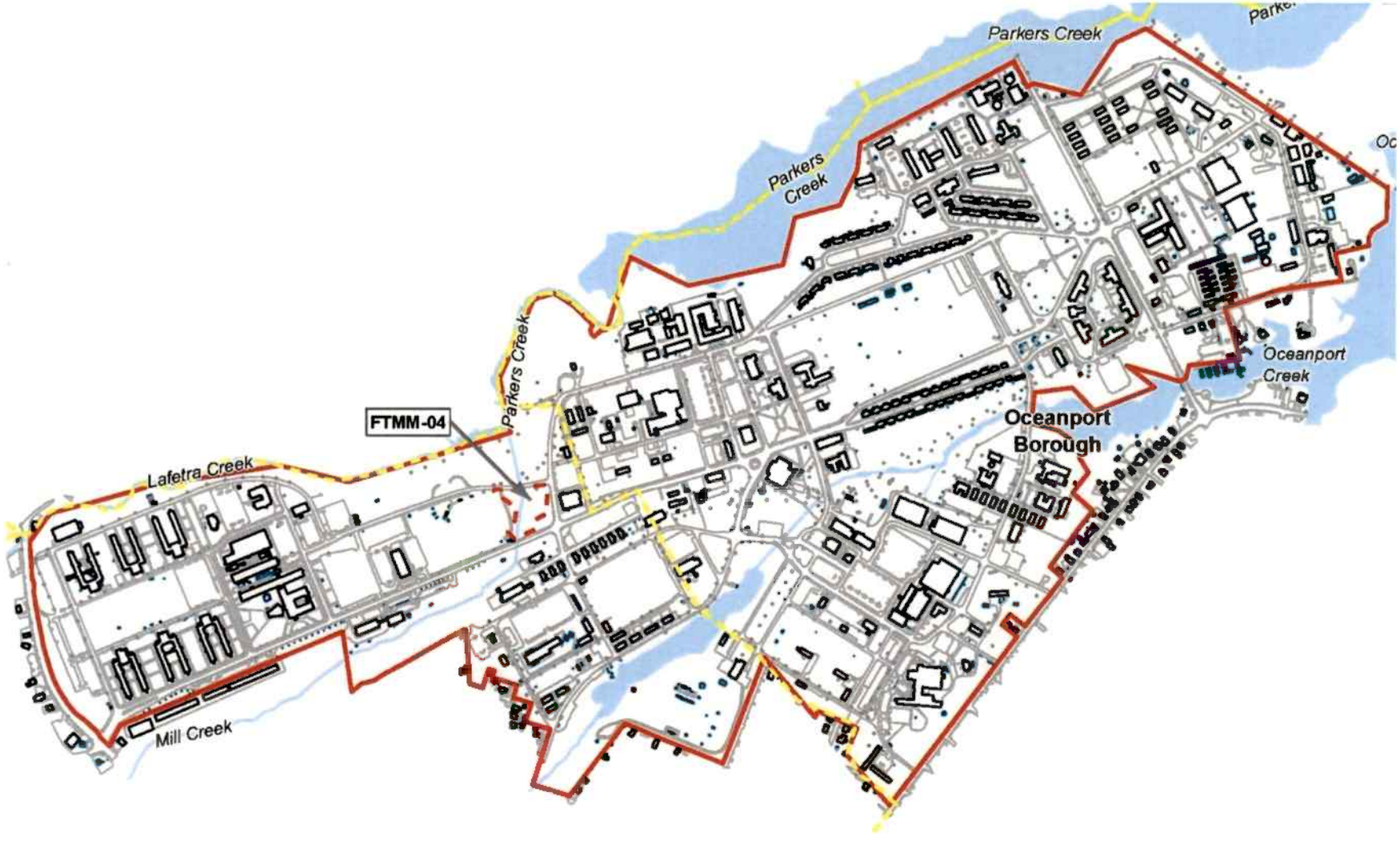

Background/History FTMM-04

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- 1.4 acres used in 1955/1956 by FTMM as landfill
- Inactive since 1956
- Currently stable vegetative cover over landfill materials
- Future use is passive open space per "Concept Plan in 2018 (10 Year Plan)" in Fort Monmouth Reuse and Development Plan (Final Plan)

FTMM-04

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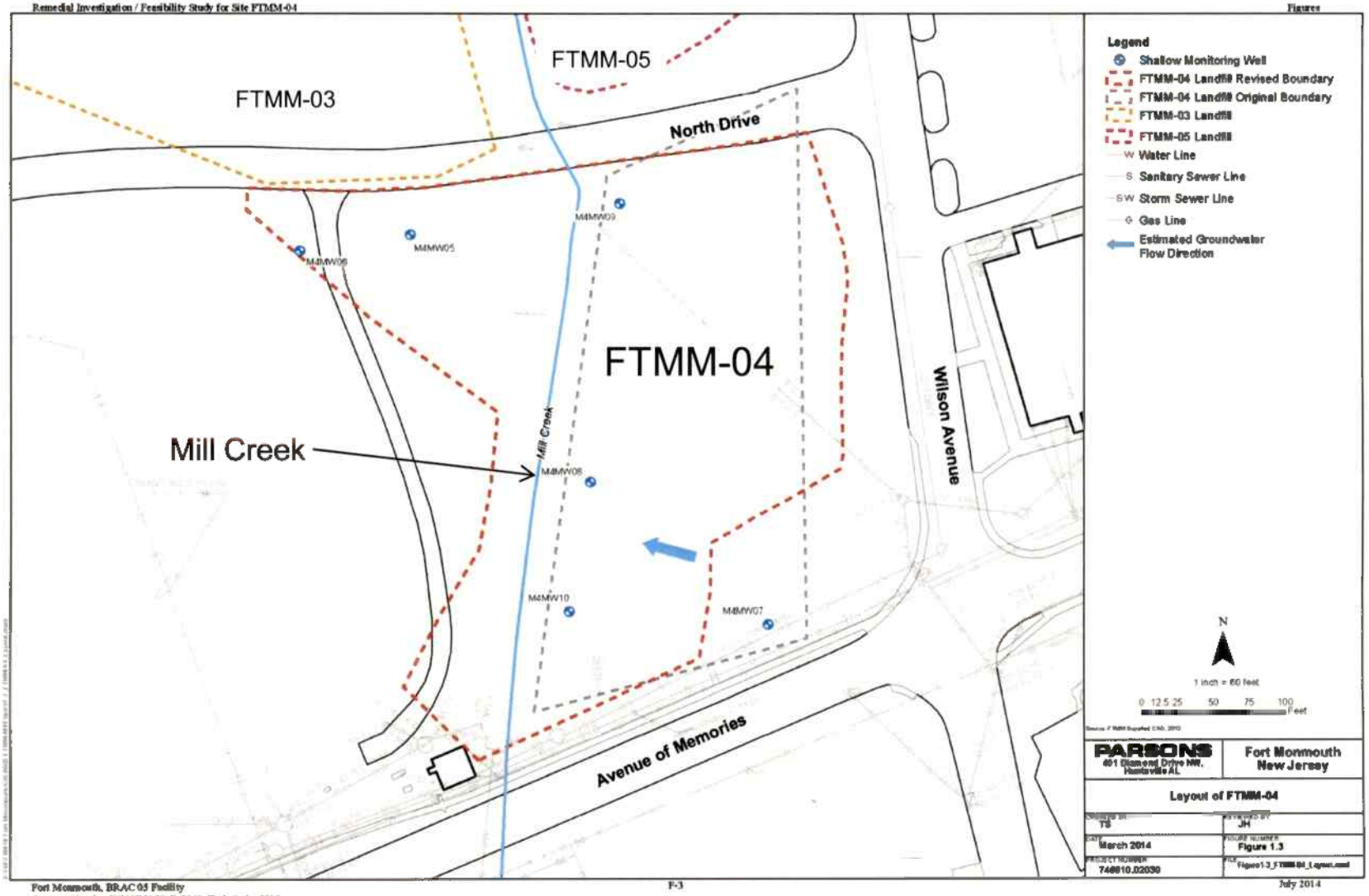

RI Summary: Nature and Extent

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- FTMM-04 investigated during many varied programs from 1997 to 2011 (baseline groundwater in 2013)
- Geologic Setting:
  1. Topsoil
  2. Landfill to 4 to 8 ft bgs
  3. Natural material (Hornerstown Fm – glauconitic clay and silt-clay)
- Field Investigations Summary:
  - Extent of landfill delineated by test pits and soil borings
  - 66 near surface soil samples from 63 borings
  - 246 groundwater samples from up to 6 monitoring wells 1997-2013
  - 159 surface water samples from up to 4 locations 1996-2010
  - 13 sediment samples from 6 locations (polychlorinated biphenyls [PCBs] only)
  - Background studies (metals)
- Data compared to U.S. Environmental Protection Agency (USEPA) regional screening level (RSLs) and NJDEP direct contact soil remediation standard (DCSRS) / Impact to Ground Water (IGW)

RI Summary: Nature and Extent

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- Chemical Results
  - Soil:
    - COPCs: 9 SVOCs (PAHs), 2 pesticides (4,4-DDE and 4,4-DDD) and 8 metals
    - > NJDEP Standards (Stds): Residential direct contact soil remediation standard (RDCSRS) : SVOCs / pesticides / metals; Non-residential direct contact soil remediation standard (NRDCSRS): SVOCs / metals; IGW: SVOCs / metals
  - Groundwater (since 2008)
    - COPCs: None
    - > NJDEP Stds: Groundwater Quality Standard (GWQS) : metals (NJDEP concurrence metals attributable to background)
  - Surface Water (since 2007)
    - COPCs: None
  - Sediment:
    - COPCs: None (one PCB < NJDEP RDCSRS)

RI Summary: Risk Assessment

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- Human health risk assessment (HHRA) to provide a quantitative evaluation of the risk associated to exposure to soil (no COPCs in groundwater, surface water and sediment)
- Evaluated Non-Carcinogenic and Carcinogenic Human Health Risks (current and future) to Soil
  - Outdoor worker
  - Recreational user
- Soil at FTMM-04 meets EPA's acceptable risk ranges
- BEE 2012 (ecological): unlikely to have deleterious effect on ecological receptors/habitats - conclusions accepted by NJDEP

RI Summary: Recommendation

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- Nature and extent of site-related contamination and associated risk to human health have been characterized.
- Full FS is not recommended because CERCLA risks to human health and the environment are within acceptable risk ranges for the current and future land uses

FS Summary

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- No further action required under CERCLA
- However, actions are needed to comply with NJDEP requirements
  - Vegetated soil cover (cap) will be placed over the landfill
  - Implement Institutional Controls (ICs) through a land use controls (LUC) Implementation Plan
    - Define cap extent and long-term maintenance
    - Prevent residential use
    - File deed notice to document LUCs
    - Biennial reviews of LUCs

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QUESTIONS