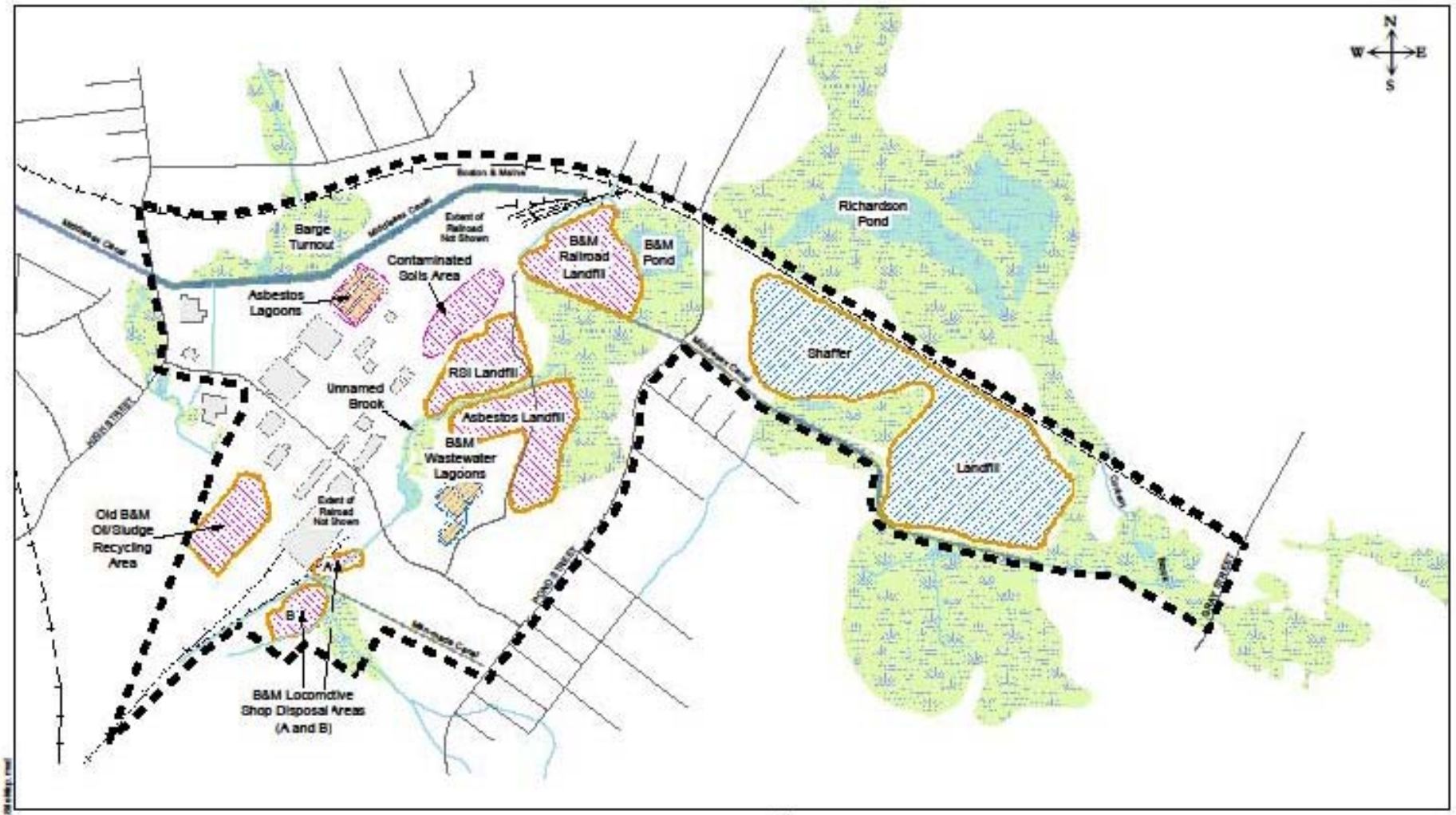
Public Information Meeting
EPA's Proposed Cleanup Plan
Site Groundwater and Sediment

Iron Horse Park
Superfund Site
Billerica, MA
October 27, 2010

Agenda

- Welcome and Introductions - Stacy Greendlinger, USEPA
- Site Overview - Don McElroy, USEPA
  - History
  - Cleanup status
- Site Groundwater and Sediment Proposed Plan - Don McElroy, USEPA
  - Groundwater Approaches
  - Sediment Cleanup Approaches
- Next Steps - Don McElroy, USEPA
  - Comment Period
  - Formal Hearing
- Questions & Answers



LEGEND

- Site Boundary
- Roads
- Railroad
- Disposal Area Boundary
- Surface Water
- Wetlands
- Lagoon
- Building
- Cleanup Completed
- Cleanup Under Way

Iron Horse Park Superfund Site Map

Cleanup Status

- 1988 – B&M Wastewater Lagoons (Operable Unit 1) cleanup plan chosen
- 1991 – Shaffer Landfill (Operable Unit 2) cleanup plan chosen
- 2003 – B&M Wastewater Lagoons cleanup complete
- 2003 – Shaffer Landfill construction complete
- 2004 – Source Areas (Operable Unit 3) cleanup plan chosen
- 2010 – Source Areas cap construction underway for 1 source area; design under way at remaining 6 areas

The Superfund Process:
from Discovery *to* Cleanup

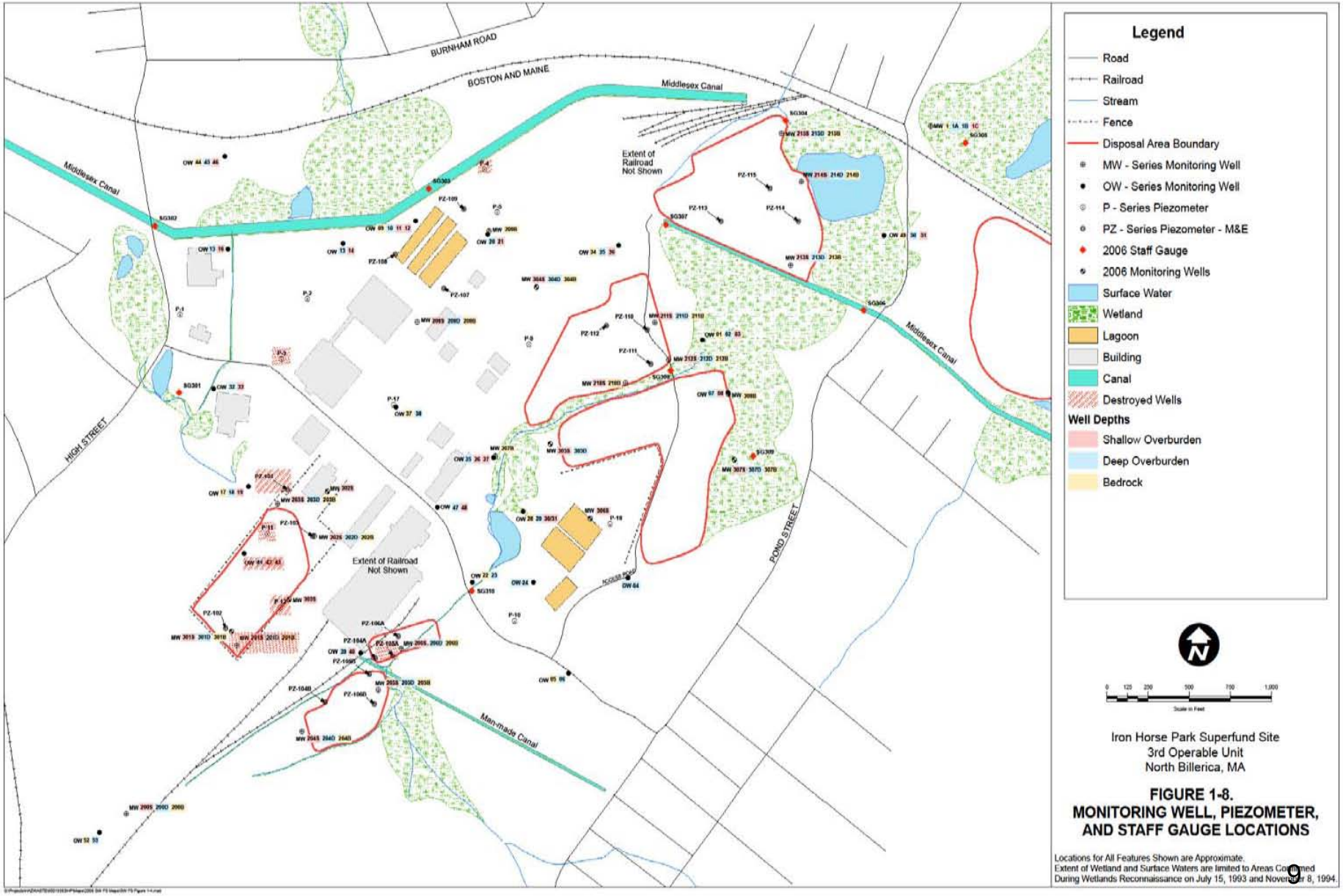
What are the Remedial Investigation and Risk Assessment?

- Identifies the type and extent of contamination on the site
- Identifies sensitive populations that may be affected by contamination on the site by preparation of
  - Public Health Risk Assessment
  - Baseline Ecological Risk Assessment

Remedial Investigation Overview

Data Collection

- Groundwater - summary
  - About 114 groundwater monitoring wells
  - 4 sampling rounds



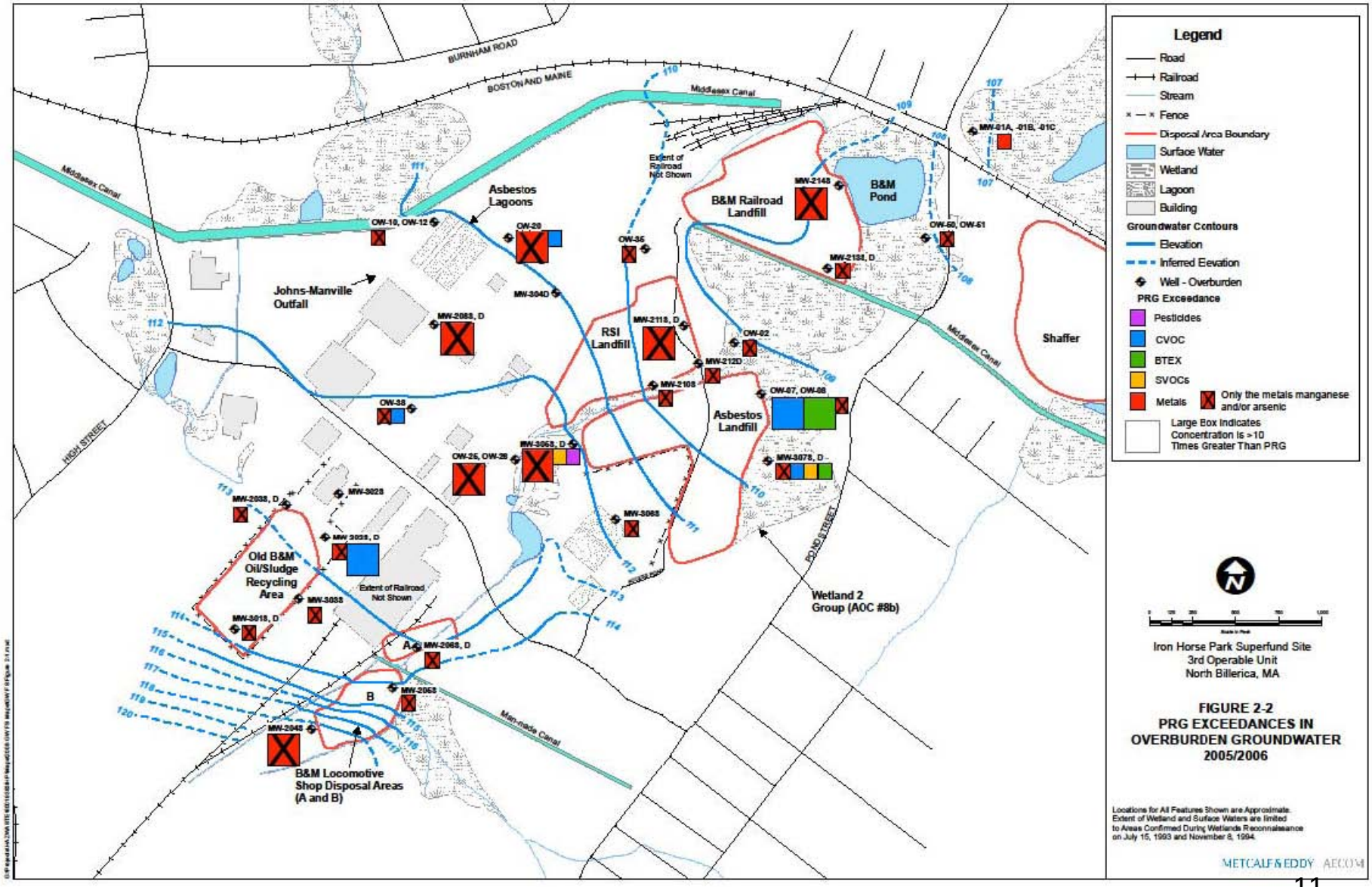
Iron Horse Park Superfund Site
3rd Operable Unit
North Billerica, MA

FIGURE 1-8.
MONITORING WELL, PIEZOMETER, AND STAFF GAUGE LOCATIONS

Locations for All Features Shown are Approximate.
Extent of Wetland and Surface Waters are limited to Areas Confirmed During Wetlands Reconnaissance on July 15, 1993 and November 8, 1994.

Remedial Investigation - Results Groundwater

- Sporadic groundwater contamination over the Site
- No defined contaminant plume
- No current exposure
- No risk from vapor migration
- Risk to potential future on-site resident groundwater user. Risk is from:
  - Volatile Organic Compounds
  - Metals
  - 1 semi-volatile compound, 1 pesticide


Legend
Road
Railroad
Stream
Fence
Disposal Area Boundary
Surface Water
Wetland
Lagoon
Building
Groundwater Contours
Elevation
Inferred Elevation
Well - Overburden
PRG Exceedance
Pesticides
CVOC
BTEX
SVOCs
Metals
Only the metals manganese and/or arsenic
Large Box Indicates Concentration is >10 Times Greater Than PRG
BURNHAM ROAD
BOSTON AND MAINE
Middlesex Canal
Asbestos Lagoons
B&M Railroad Landfill
B&M Pond
Johns-Manville Outfall
RSI Landfill
Asbestos Landfill
Shaffer
HIGH STREET
POND STREET
Old B&M Oil/Sludge Recycling Area
Extent of Railroad Not Shown
Wetland 2 Group (AOC #8b)
B&M Locomotive Shop Disposal Areas (A and B)
Man-made Canal
Iron Horse Park Superfund Site
3rd Operable Unit
North Billerica, MA
FIGURE 2-2
PRG EXCEEDANCES IN OVERBURDEN GROUNDWATER
2005/2006
Locations for All Features Shown are Approximate.
Extent of Wetland and Surface Waters are limited to Areas Confirmed During Wetlands Reconnaissance on July 15, 1993 and November 8, 1994.
METCALF & EDDY AECOM

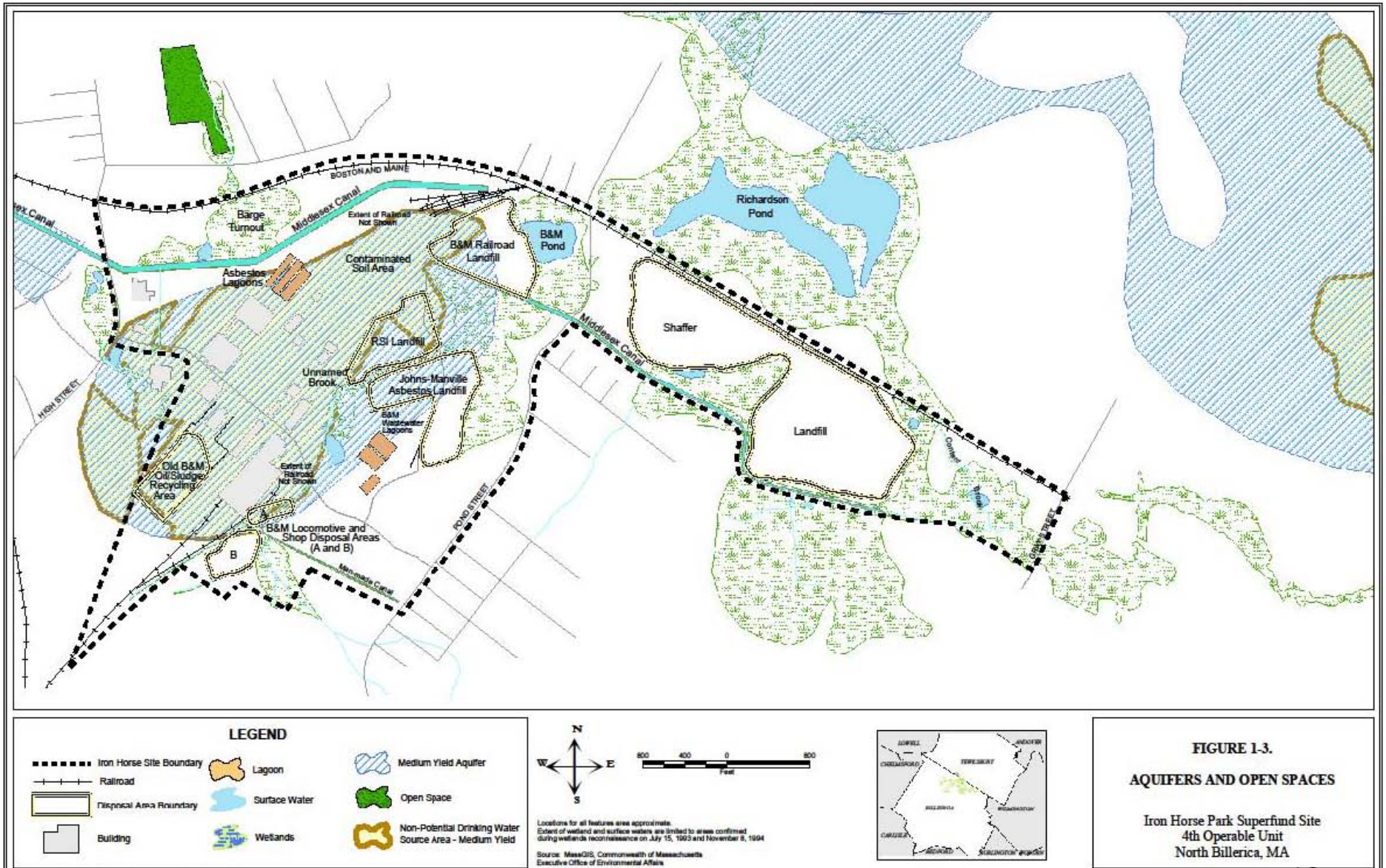


FIGURE 1-3.

AQUIFERS AND OPEN SPACES

Iron Horse Park Superfund Site
4th Operable Unit
North Billerica, MA

Surface Water

- No human health risk
- No ecological risk

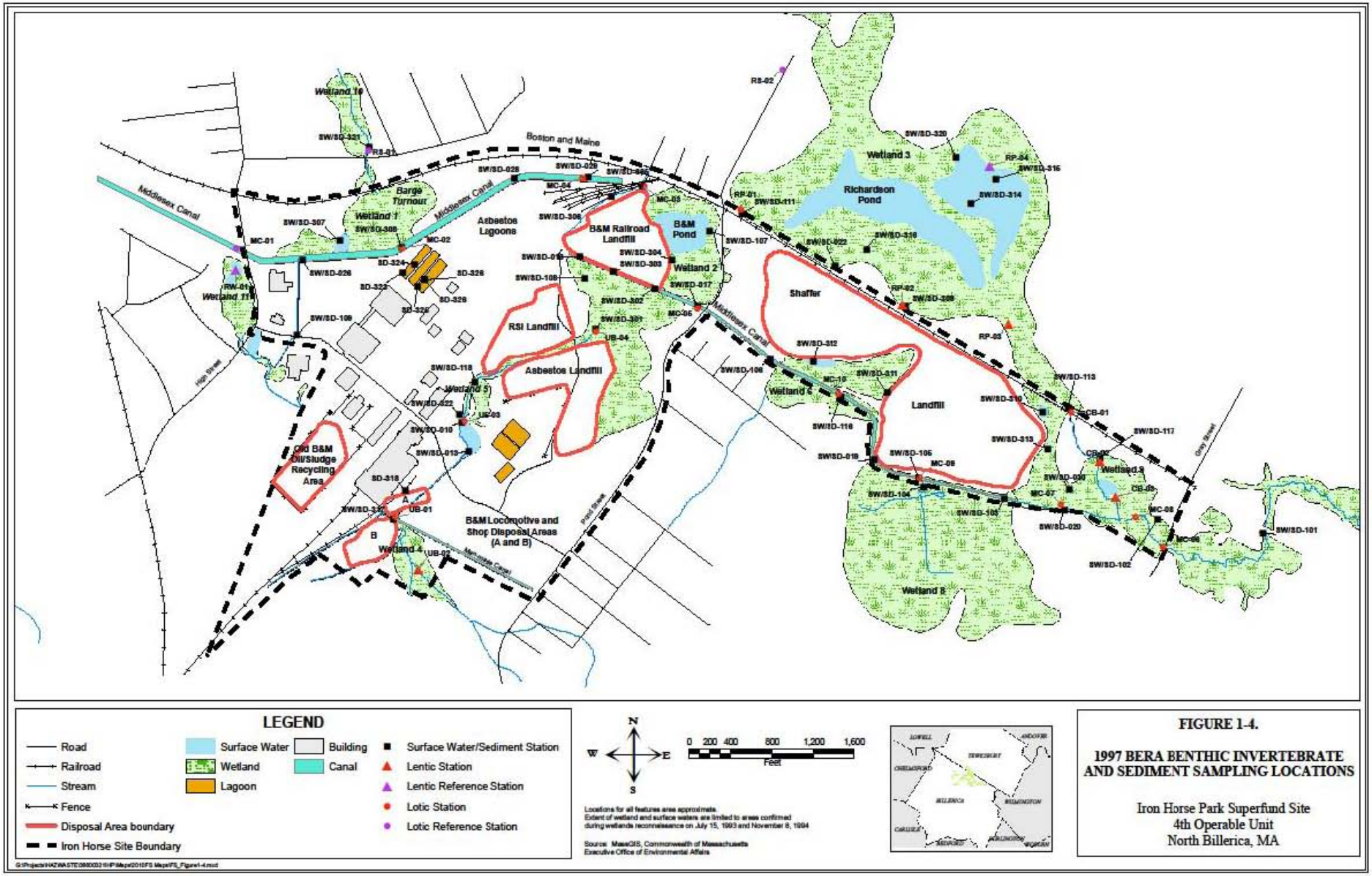


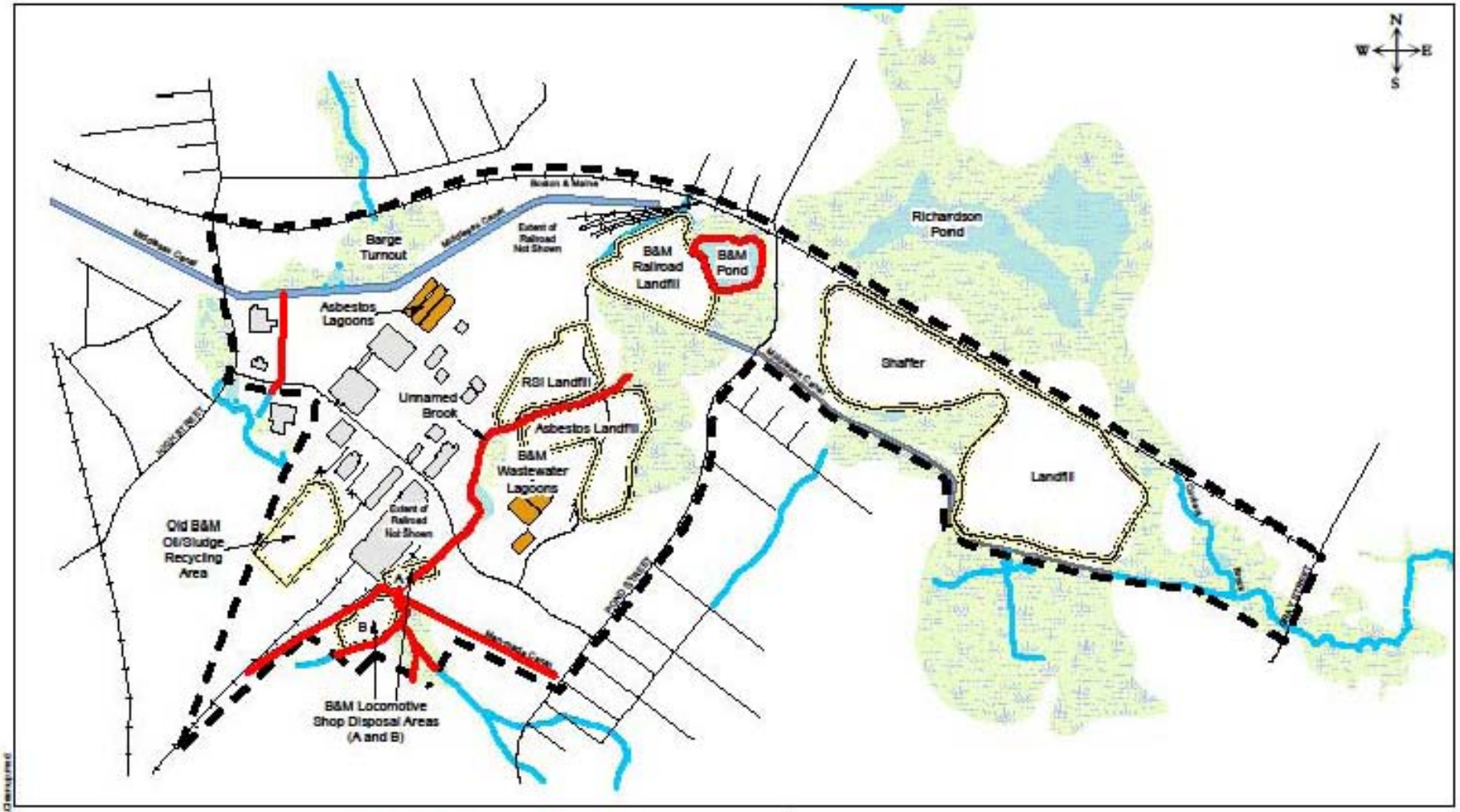
FIGURE 1-4.

1997 BERA BENTHIC INVERTEBRATE AND SEDIMENT SAMPLING LOCATIONS

Iron Horse Park Superfund Site
4th Operable Unit
North Billerica, MA

Remedial Investigation – Results Sediment

- Risk in B&M Pond and Unnamed Brook



LEGEND

- Road
- Railroad
- Stream
- Fence
- Disposal Area boundary
- Iron Horse Site Boundary
- Extent of Sediment Potentially Requiring Remediation
- Surface Water
- Lagoon
- Building
- Canal
- Wetland

Iron Horse Park Superfund Site
Proposed Extent of Sediment Cleanup

Feasibility Study - Introduction

- Identifies and evaluates potential cleanup technologies
- Addresses areas of unacceptable risk identified in the Risk Assessments
- Identifies, screens, and compares cleanup options
- Used by EPA to prepare the Proposed Cleanup Plan

Feasibility Study - Process

- Identifies relevant federal and state regulations ("ARARs")
- Determines site-specific cleanup goals
- Identifies potential cleanup technologies
- Screens appropriate technologies
- Assembles applicable cleanup technologies or various combinations of cleanup technologies
- Conducts a detailed evaluation of cleanup technologies
  - Compares to EPA's nine criteria
  - Compares alternatives to one another

Nine Criteria for Cleanup Selection

- Threshold Criteria:
  - Overall Protection of Human Health and the Environment (“Protectiveness”)
  - Compliance with ARARs
- Balancing Criteria:
  - Long-term Effectiveness and Permanence
  - Reduction in Toxicity, Mobility, and Volume
  - Short-term Effectiveness
  - Implementability
  - Cost

Nine Criteria For Cleanup Selection

- Modifying Criteria:
  - State Acceptance
  - Community Acceptance
- These are evaluated based on the public comment period

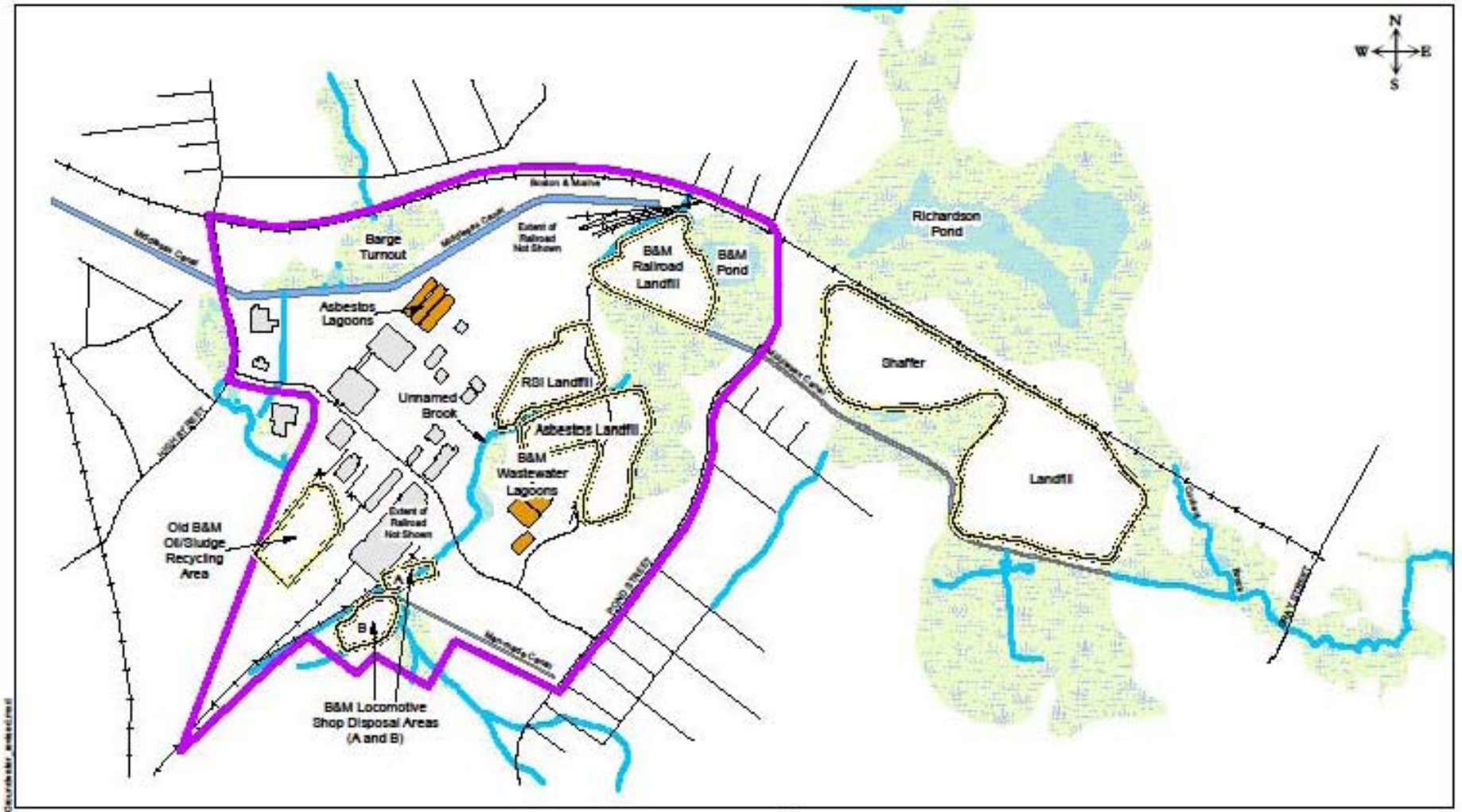
Feasibility Study – Results/Outcomes

- Groundwater
  - No current exposures
  - No indoor air risk (vapor intrusion)
  - No groundwater useage
  - Monitoring
- Sediment
  - Ecological Risk in B&M Pond and Unnamed Brook must be addressed

Proposed Alternatives - Groundwater

- Monitoring
  - Establish Compliance Zone Boundary
  - Ensure contamination does not migrate beyond boundary
  - Implement land use restrictions to restrict groundwater use and protect monitoring wells

Cost: $1.3 million



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- Road
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- Compliance Zone Boundary
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- Lagoon
- Building
- Canal
- Wetland

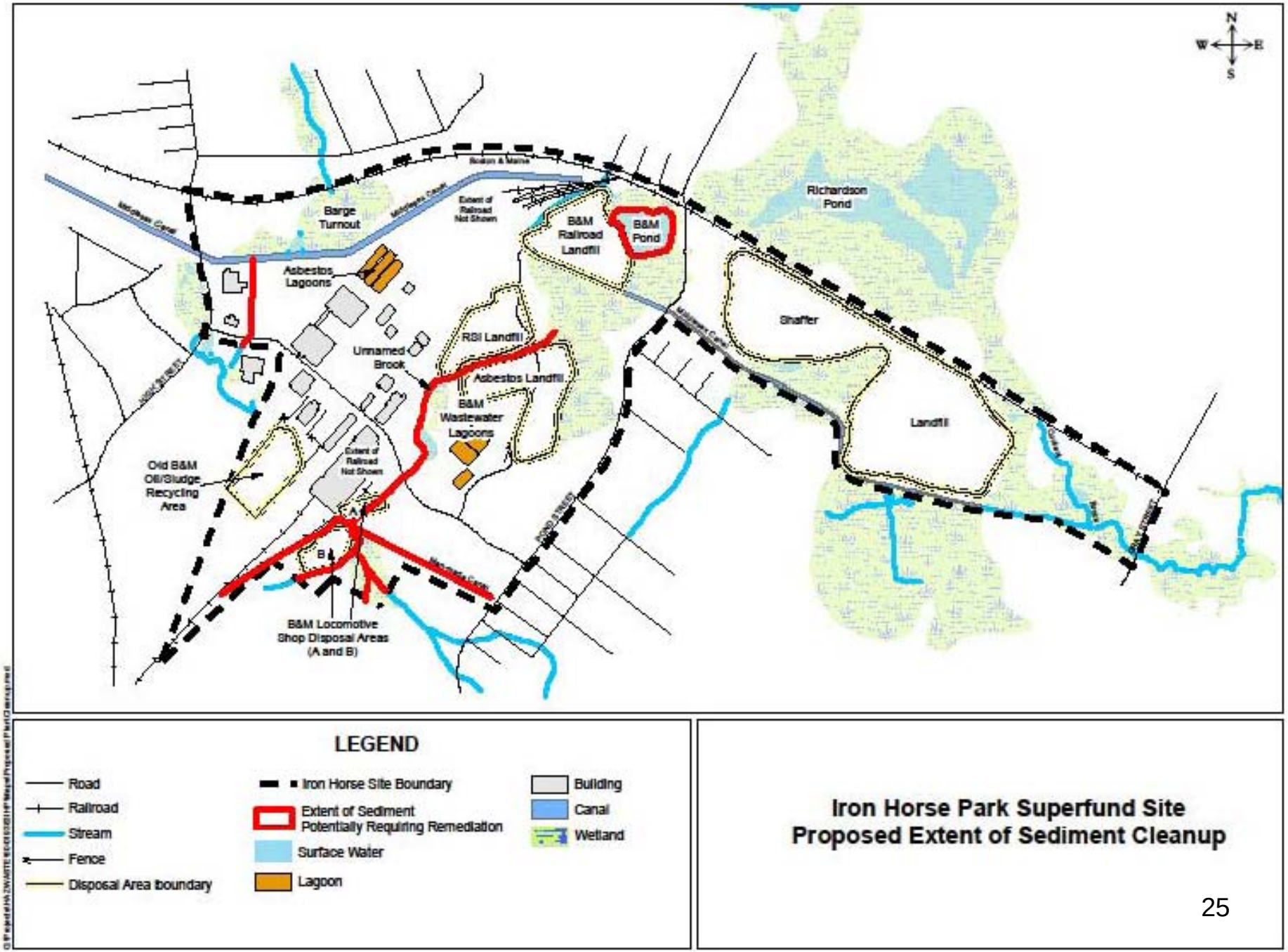
Iron Horse Park Superfund Site
Groundwater

Proposed Alternatives - Sediment

- SD-4 – B&M Pond Sediment Removal and Monitored Natural Recovery (MNR)
  - Sediment Removal from B&M Pond (an estimated 7,400 cubic yards)
  - MNR at Unnamed Brook
  - Stormwater controls to prevent recontamination

  Cost: $4.1 million
- SD-6 – B&M Pond and Unnamed Brook Sediment Removal
  - Sediment removal from both B&M Pond and Unnamed Brook (an estimated 10,500 cubic yards)
  - Stormwater control to prevent recontamination

  Cost: $ 5.4 million



Iron Horse Park Superfund Site
Proposed Extent of Sediment Cleanup

EPA Preferred Sediment Alternative

- SD-4 B&M Pond Sediment Removal and Monitored Natural Recovery (MNR)
  - Sediment Removal from B&M Pond
  - MNR at Unnamed Brook
  - Stormwater control to prevent recontamination

  Cost: $4.1 million

Why Alternative SD-4?

- Protectiveness achieved within a reasonable timeframe
- Less wetlands impacts than SD-6 and less restoration required
- Less excavated material to transport
- Difficult access issues avoided
- Lower cost

Total Estimated Cost of EPA Preferred Alternatives

- Groundwater Monitoring - $ 1.3 million
- SD-4 – B&M Pond Sediment Removal and MNR at Unnamed Brook - $ 4.1 million

Total $ 5.4 million

Public Comment Period

- Public Comment Period ends November 24, 2010
  - Submit comments in writing by fax, email, or letter.
- Public Hearing November 9, 2010
  - Verbal comments will be transcribed
- EPA will respond in writing to comments in a “Responsiveness Summary” to accompany the cleanup decision by the end of February 2011.

How to Comment

- Submit comments to:

  Don McElroy
  EPA - New England
  5 Post Office Square, Suite 100
  Mail Code – OSRR07-4
  Boston, MA 02109-3912

  Email or Fax by midnight 11/24/10 to:
  mcelroy.don@epa.gov

  Fax: 617-918-0326

- Provide Verbal Comments at Public Hearing at Billerica Town Hall Auditorium on November 9, 2010 at 7pm