

Airport Road Waste Disposal Area

April 28, 2005

The University of North Carolina at Chapel Hill

Presentation Overview

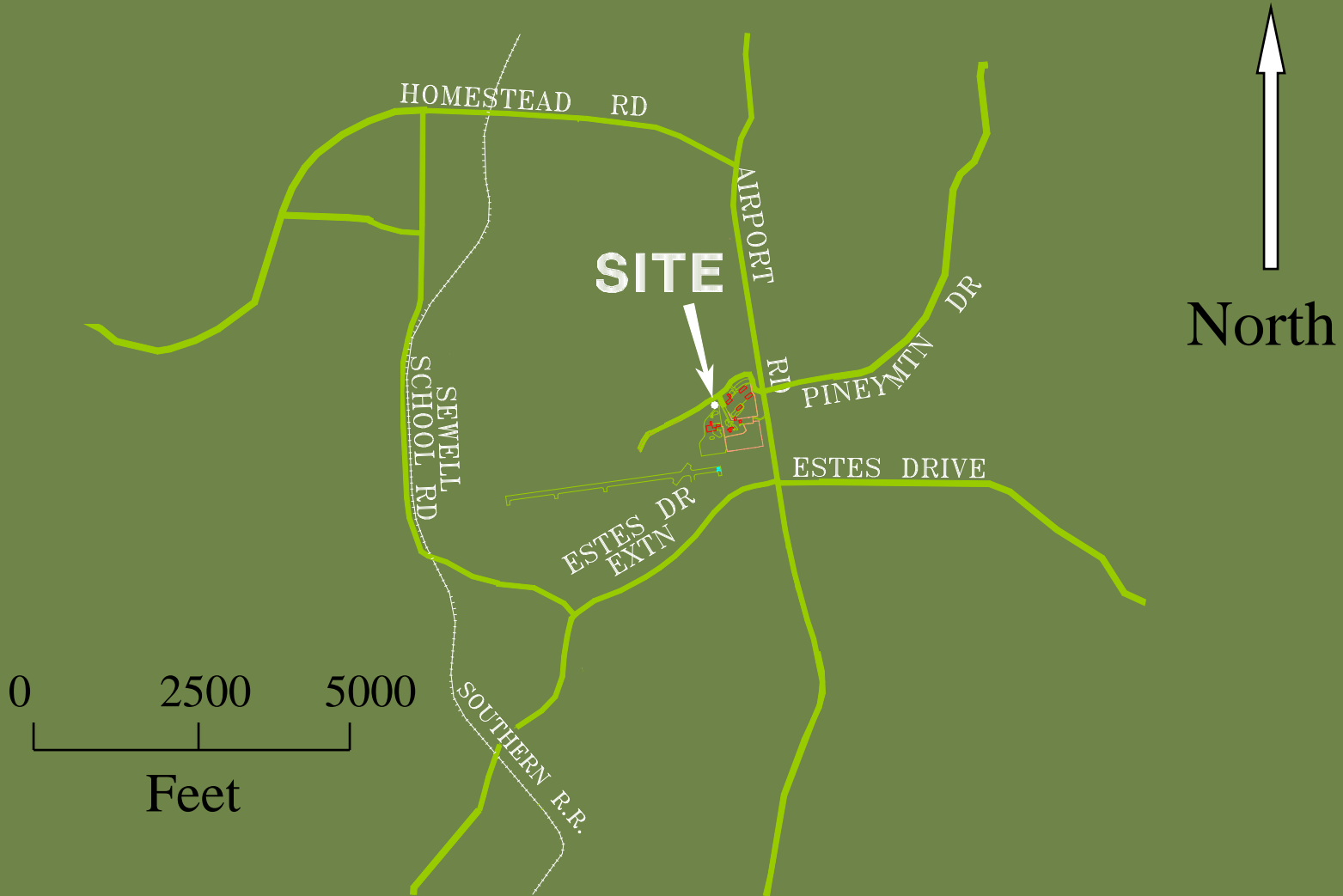
Inform the Community of the Proposed Corrective Action for the Site

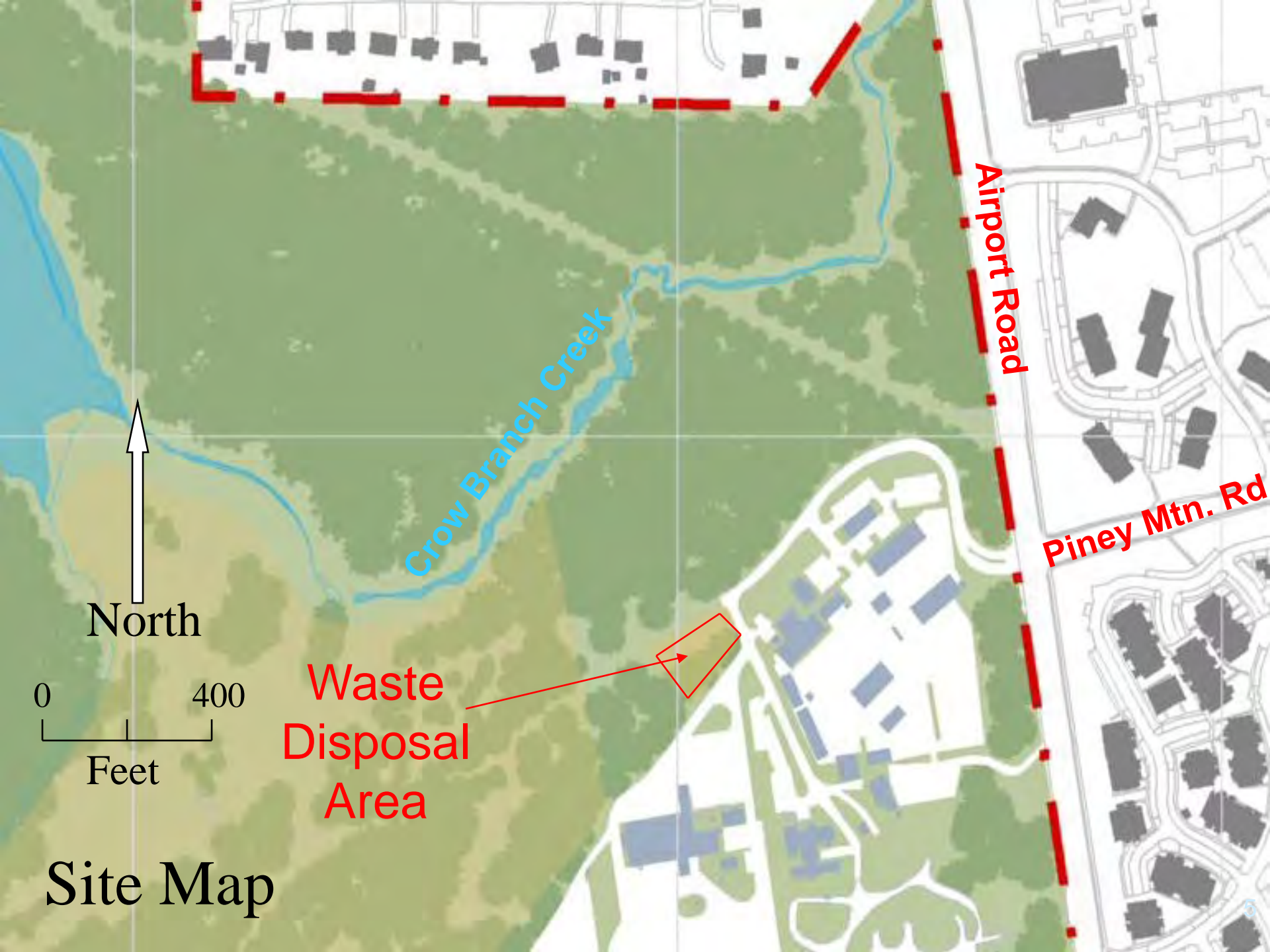
- Regulatory framework and program milestones
- Location and site history
- Remedial investigation activities and results
- Proposed corrective action
- Next steps
- Questions and answers

Regulatory Framework and Program Milestones

- Site is under NC Department of Environment and Natural Resources (DENR) Inactive Hazardous Sites Branch, Registered Environmental Consultant Program
- Administrative Agreement between DENR, ARCADIS and UNC executed January 2004
- Milestones
 - > Complete Remedial Investigation within 3 years of Agreement
 - Remedial Investigation Report submitted October 2004
 - > Commence groundwater remedy within 2 years following Remedial Investigation
 - Remedial Action Plan submitted April 2005
 - > Complete waste area (source) remedy within 8 years of Agreement

Site Location





Crow Branch Creek

Airport Road

Piney Mtn. Rd

Waste Disposal Area

North

0 400
Feet

Site Map

Background

- Waste disposal area (source) is 100 x 200 ft.
- Used to dispose of chemical wastes from UNC's teaching, research and hospital laboratories from 1973-1979
- Approximately 18 separate burials
 - > 8-12 ft. deep, with 4-6 ft. earth cover
- Disposal activities were conducted in accordance with applicable Federal and State guidelines
 - > Approved by the State of North Carolina

Applicable Regulations for Remedial Investigation and Remedial Action Plan

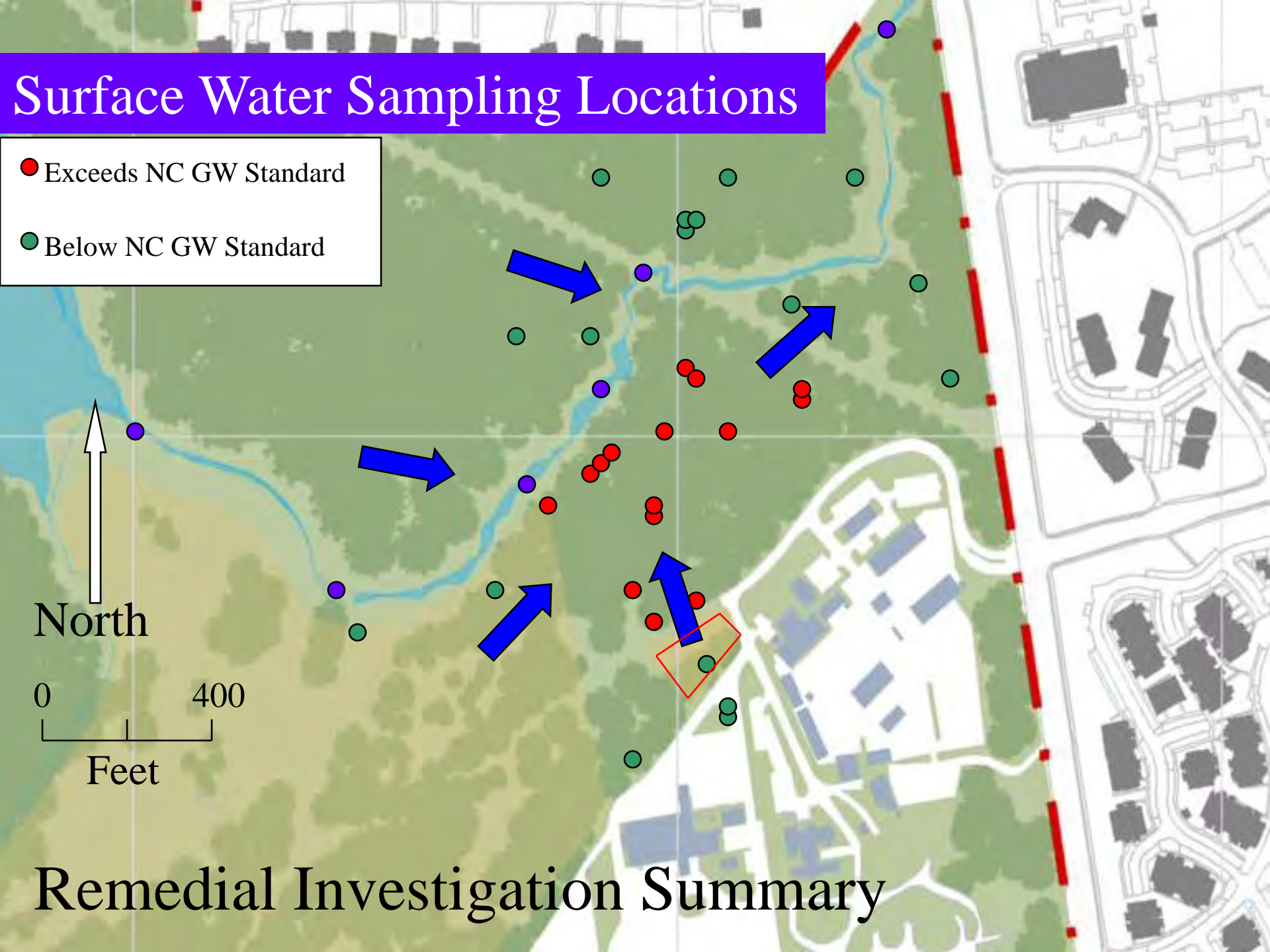
Work is conducted to meet the requirements of the North Carolina State Inactive Hazardous Sites Branch Registered Environmental Consultant Program.

Remedial Investigation Results

- Remedial Investigation completed in October 2004
- No human exposure
- Soil findings indicate no impacts outside of waste disposal area
- Groundwater findings confirm chemical concentrations exceed State Groundwater Standards on UNC property
- Surface water findings sporadically detect only one constituent—far below EPA Drinking Water Standard

Surface Water Sampling Locations

- Exceeds NC GW Standard
- Below NC GW Standard



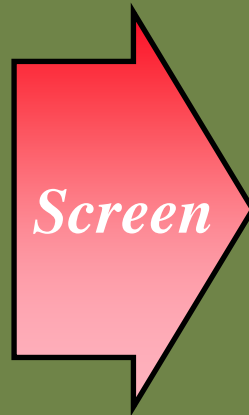
Remedial Investigation Summary

Remedial Action Plan Objectives

- Protect human health and the environment
- Control and remediate groundwater
- Remediate the source of contamination
(waste disposal area)
- Screening criteria:
 - > Protection of human health and the environment
 - > Compliance with applicable federal, state and local regulations
 - > Long-term effectiveness and permanence
 - > Short-term effectiveness
 - > Ability to implement
 - > Cost

Analysis of Groundwater Remediation Alternatives

All
Technologies



Viable Alternatives

- No action
- Funnel-and-gate and conventional groundwater recovery, treatment and disposal
- In-situ* chemical treatment and conventional groundwater recovery, treatment and disposal
- Vacuum-enhanced recovery and conventional groundwater recovery, treatment and disposal

Selected Remedial Alternative for Groundwater

Control and Remediate Groundwater:

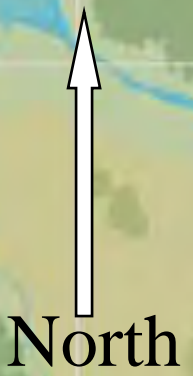
- Conventional pump and treat for shallow and bedrock aquifers
- Vacuum-enhanced recovery near the site
- Groundwater treated in an on-site system

Equipment Building

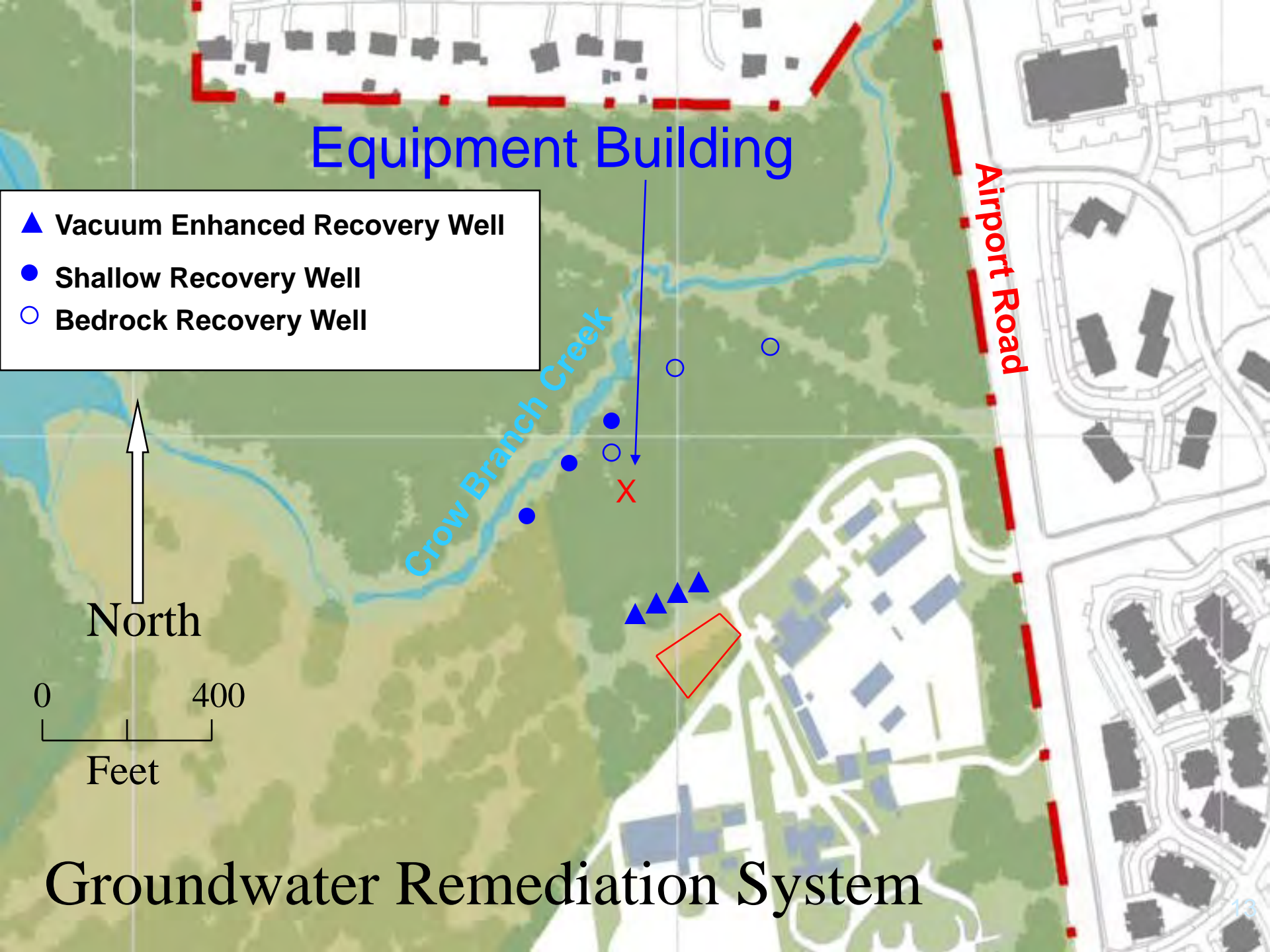
- ▲ Vacuum Enhanced Recovery Well
- Shallow Recovery Well
- Bedrock Recovery Well

Crow Branch Creek

Airport Road

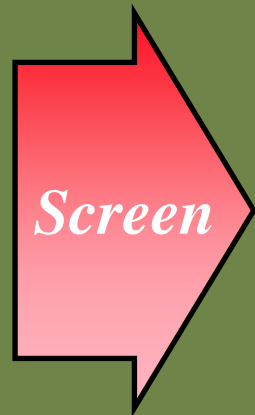


Groundwater Remediation System



Analysis of Source Remediation Alternatives

All
Technologies



Viability Alternatives

- No action
- In-situ* mixing/solidification of primary and secondary sources
- Removal, *ex-situ* mixing and off-site disposal of primary source (waste), and removal and off-site disposal of secondary source (impacted soil)
- Removal and off-site disposal of waste and impacted soil

Selected Remedial Alternative for the Waste Disposal Area (Source)

- ◆ Removal of waste and impacted soil
- ◆ Waste material will be removed, properly segregated and packaged for safe shipment to permitted offsite treatment facility

Next Steps

- Remedial Action Plan was submitted to DENR on 4/21/2005
- Complete remedial design
- Seek needed permits for groundwater remediation system
- Implement Remedial Action Plan

For more information:

<http://www.ehs.unc.edu/rap.shtml>

Questions & Answers