

Project Activity Report

OHV Trails 319 Project

ANRC Project 06-700
September 17 & 18, 2008



Assessing OHV Trails

■ OHV Trails 319 Project

- Assessment of OHV trails in the Cove Creek watershed
- Identifying soil resource impacts
- Effective BMP/Restoration measures

■ Ozark-St. Francis National Forest

- Lee Creek Unit Proposed Managed Buckhorn OHV Trails Project



OHV Trails 319 Project

Why the Concern?

- ✓ Off Highway Vehicles or OHV use fast growing recreation
- ✓ Unplanned, user-defined trails & roads are created continuously
- ✓ Unmanaged OHV use can
 - ✓ Damage wetland & riparian
 - ✓ Produce severe soil erosion
 - ✓ Spread invasive weeds
- ✓ Public Managers need
 - ✓ To understand impacts
 - ✓ Strategies to mitigate impacts



OHV Trails 319 Project

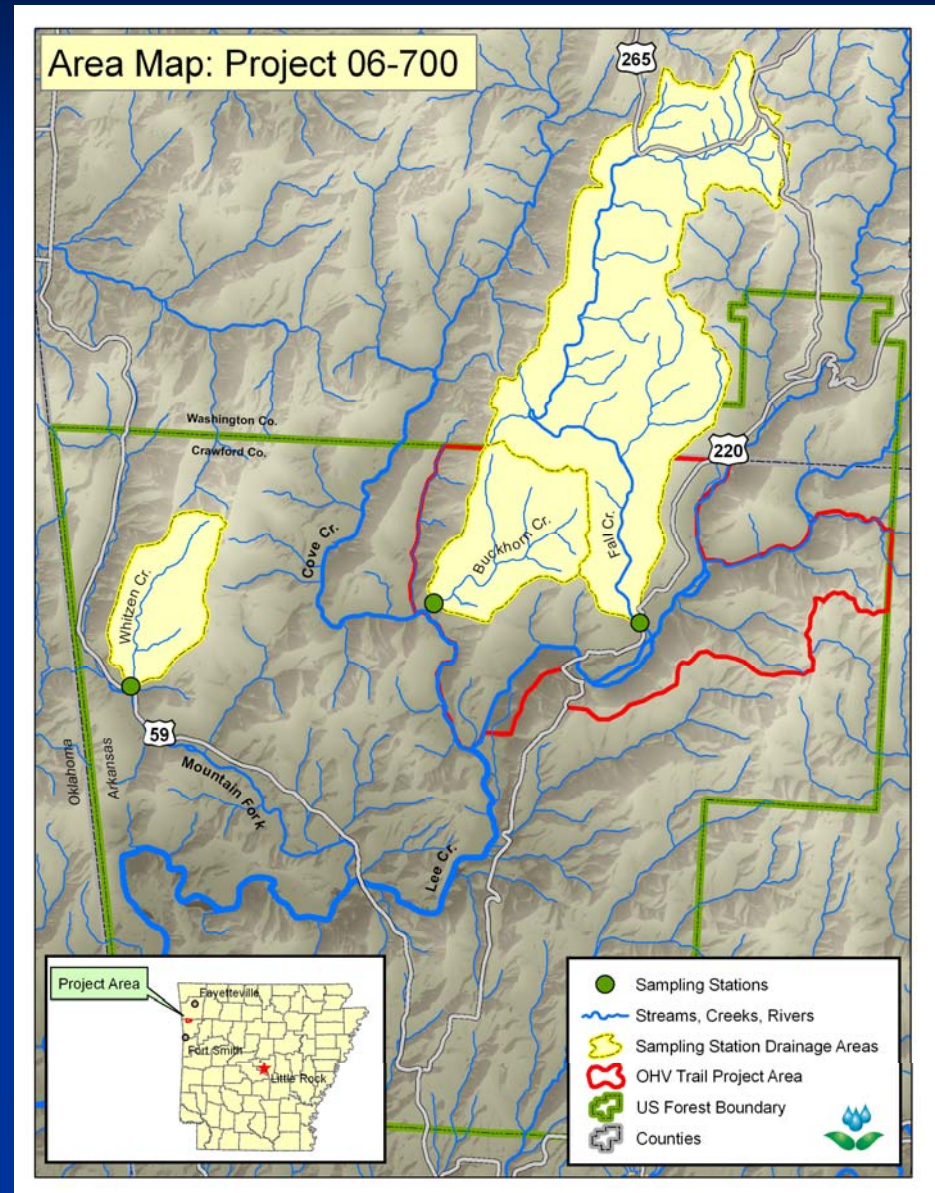
- ✓ **Project Partners**
 - ✓ Arkansas Natural Resource Commission
 - ✓ US Environmental Protection Agency
 - ✓ U.S. Forest Service
 - ✓ City of Fort Smith
 - ✓ Arkansas Game & Fish Commission
 - ✓ Watershed Conservation Resource Center



OHV Trails 319 Project

Project Location

- ✓ Ozark St. Francis National Forest
- ✓ Boston Mountain Ranger's District
- ✓ Lee Creek Subdivision



OHV Trails 319 Project

Project Objectives:

- ✓ Decrease soil erosion from user-created OHV trail and reduce sediment loads to Lee Creek
- ✓ Estimate sediment loads from OHV trails
- ✓ Evaluate effectiveness of Best Management Practice (BMP) implementation



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Project Activities:

- ✓ **Conduct Trail & Road Inventory using GPS – completed 2007**
- ✓ **Evaluate soil erosion**
 - ✓ Measure in the field – selected, installed, & surveyed monitoring sites – initial completed 2008; resurvey is ongoing & final will be early 2009
 - ✓ WEPP modeling – data collection scheduled for fall 2008; modeling schedule for 2009
 - ✓ Both will be used to estimate sediment loads from OHV trails and sediment load reduction from BMP implementation



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Data Collection Activities

- Data Collection – Evaluate Soil Erosion
 - Cross Section Measurements
 - Photopoint Monitoring
 - Soil Disturbance Monitoring



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Data Collection Activities

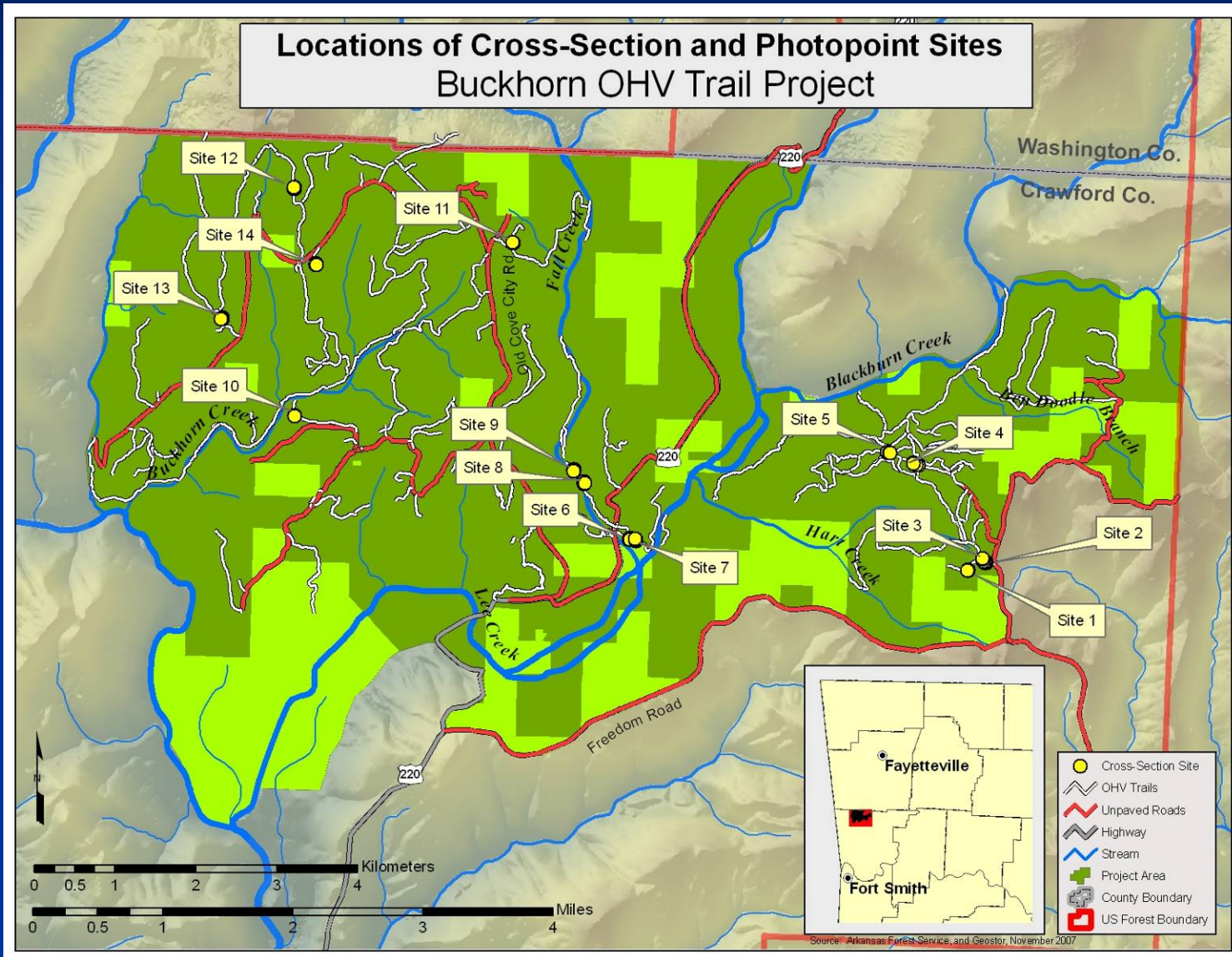
■ Cross Section Measurements

- Measure erosion of trails
- 4 Terrain Types
 - ✓ Hillside
 - ✓ Mountain Tops
 - ✓ Steep Grade
 - ✓ Riparian
- Multiple cross sections per site
- 14 sites
- 34 cross-sections established
- Follow-up measurements



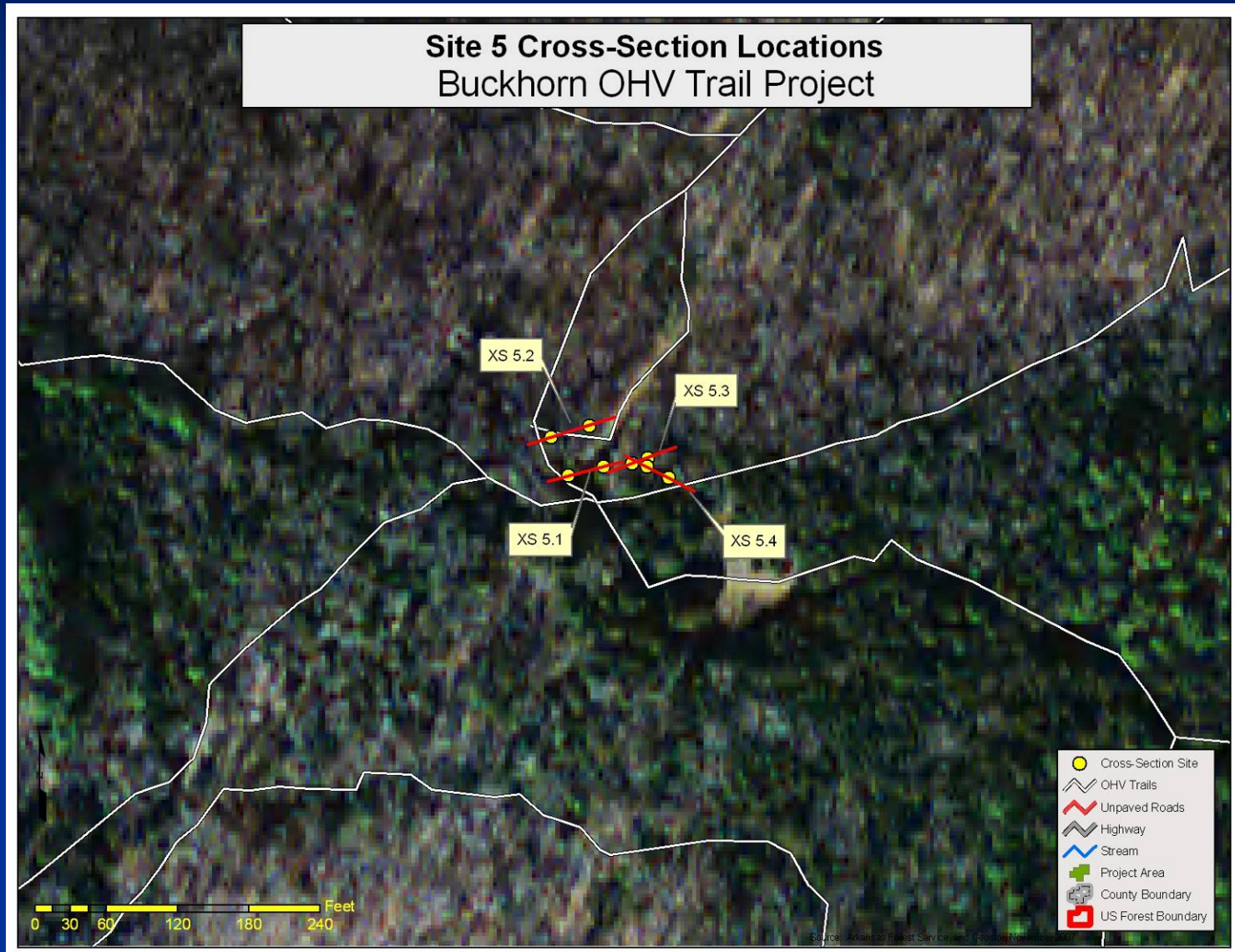
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Data Collection Activities

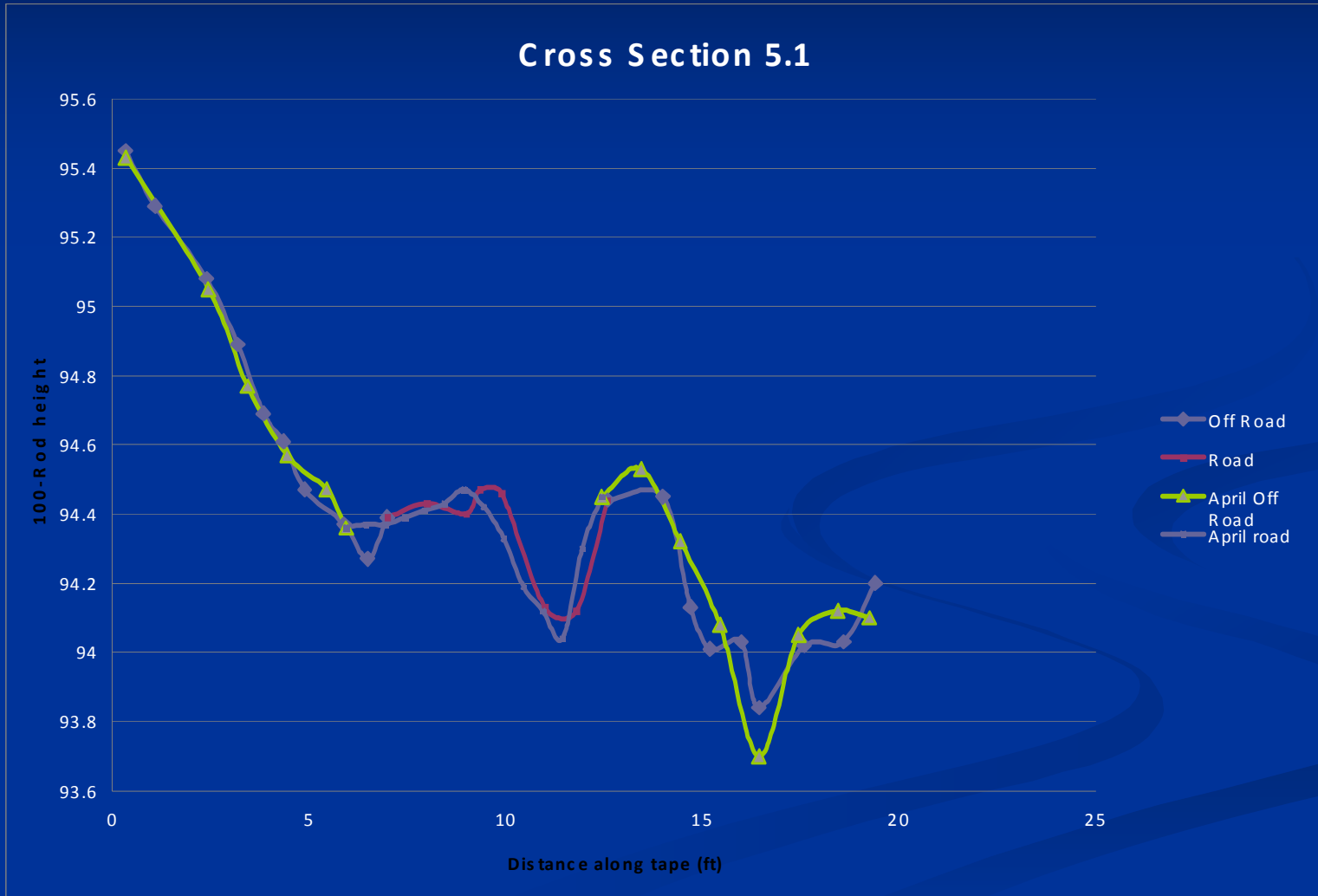


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Data Collection Activities



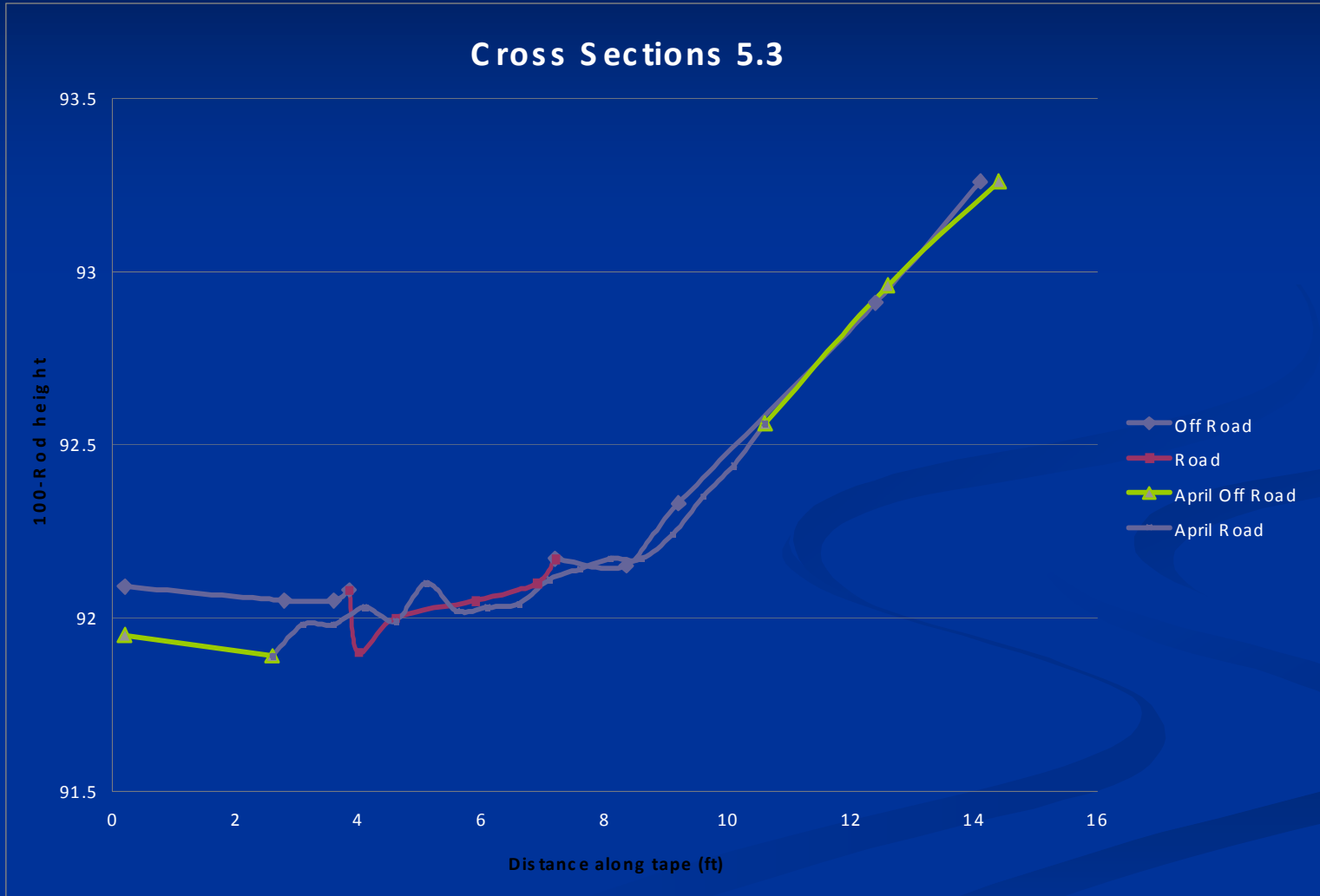
OHV Trails 319 Project Data Collection Activities



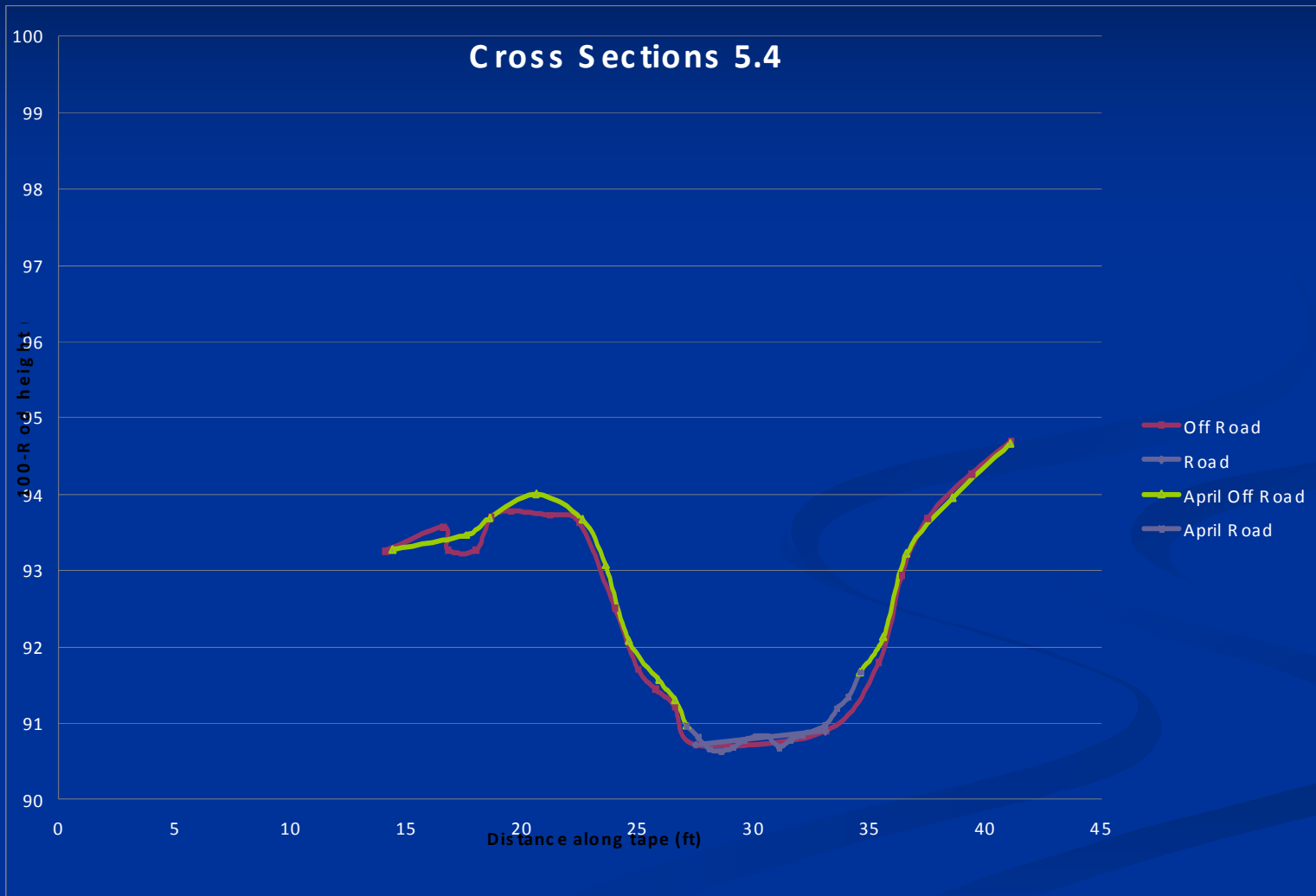
OHV Trails 319 Project Data Collection Activities



OHV Trails 319 Project Data Collection Activities



OHV Trails 319 Project Data Collection Activities



OHV Trails 319 Project

Data Collection Activities

- Photopoint Monitoring
 - Detect Changes in Trail Conditions
 - Before and After Photos
 - Photos taken at:
 - Cross-Sections
 - BMP Sites



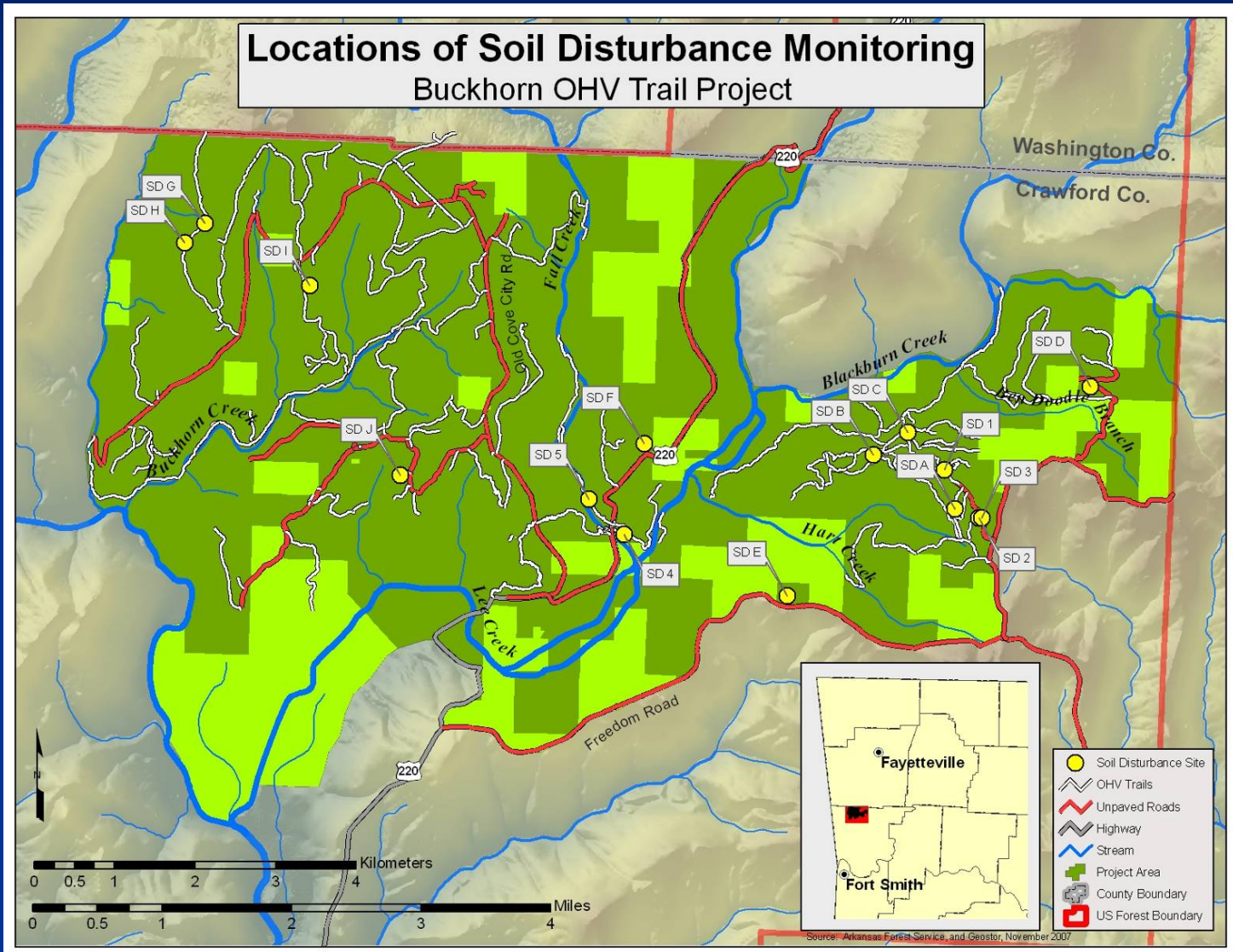
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Data Collection Activities

- Soil Disturbance Monitoring
 - Detect changes in soil disturbance
 - 15 Sites
 - 10 Randomly Selected
 - 5 Pre-determined
 - 10 transects at each site



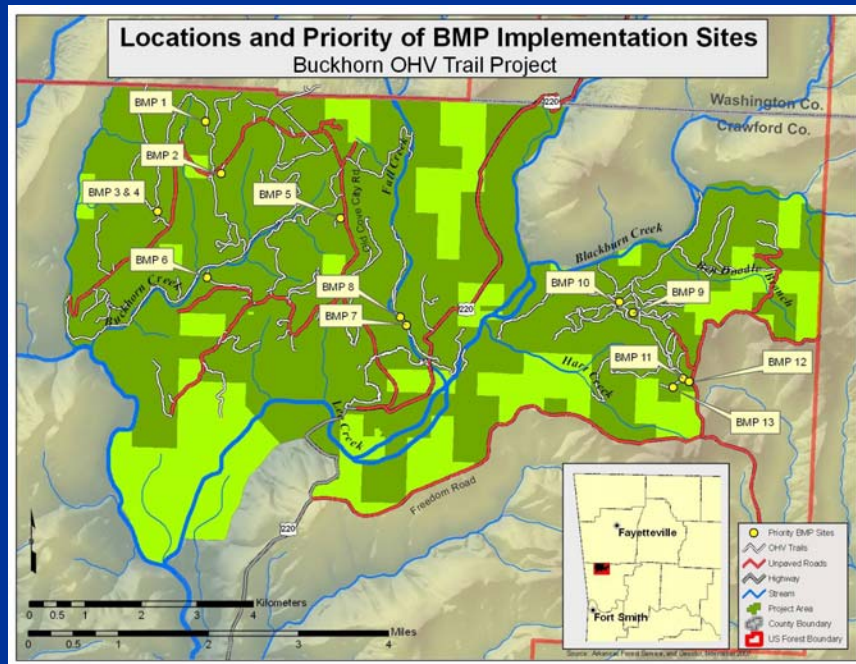
OHV Trails 319 Project Data Collection Activities



OHV Trails 319 Project

Project Activities:

- ✓ **BMP Implementation Site Selection – completed 2007**
- ✓ **BMP Implementation – initiated 2008**



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BMP Implementation

- **Road Closure** – select areas physically closed to OHV use in order to reduce erosion, lower road density, and to enhance wildlife habitat values.
- **Install physical barriers to road:**
 - Rocks
 - Vegetation
 - Gates
- **Physically remove roads from the ground**
- **Planting road prisms with native vegetation**
- **Enhance vegetation**
- **Signage**
- **Increasing user awareness and enforcement**



■ NRCS Conservation Practice Codes – 472, 484, 560, 580



OHV Trails 319 Project BMP Implementation

Decommissioned and Closed Roads

- 12 miles of Roads Decommissioned

- Seeding
- Fertilizing
- Tree Planting
- Limit Access

- 4 miles of Closed Roads

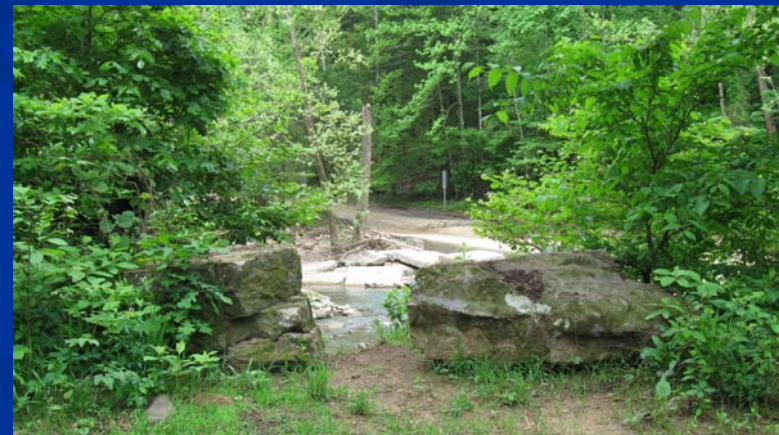
- Gates (4)
- Trees (8)
- Boulders



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BMP Implementation

- **Reduce access to streams** – to improve water quality, reduce soil loss and erosion, and to improve riparian function
 - Minimize access to the stream through one or more of the following
 - Rocks
 - Vegetation
 - Trail Route/Re-route
 - Road Closure
 - Utilize construction process to create barriers
 - Design and create acceptable stream crossings
 - Stimulate riparian revegetation
 - Signage showing stream access is restricted.
 - Enhance the ability for enforcement



OHV Trails 319 Project BMP Implementation

- **Reducing the number dispersed recreation sites**

- Techniques for restoration will be evaluated by this activity:
- Minimize access to the site through one or more of the following
 - Rocks
 - Vegetation
 - Signs
- Plant disturbed areas
- Utilize erosion control technologies
- Construct new suitable recreation sites
- Stimulate natural vegetation
- Enhance the ability for enforcement



■ NRCS Conservation Practice Codes –
472, 390, 562, 484, 342, 601, 566



OHV Trails 319 Project

Water Quality Monitoring

- Evaluate trends in water quality during project activities
- TSS and Turbidity Analysis
- 208 Baseflow Samples
- 675 Storm Samples



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Upcoming Activities

- WEPP Modeling
 - Estimate sediment loads
- Resurvey XS Sites
- Continue
 - BMP Implementation
 - Photo Documentation
 - Water Quality Monitoring
 - Public Outreach



Thank You



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